

PSYCHOLOGICAL ABSTRACTS

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GENERAL

(incl. Statistics)

4418. Angier, R. P. Edward Stevens Robinson. *Psychol. Rev.*, 1937, 44, 267-273.—Robinson's professional career was divided between the Chicago period, in which he gave his energies to laboratory experimental psychology, learning and mental fatigue, and the later Yale period, devoted to explorations in social psychology, typified by the museum studies and studies of the psychology of jurisprudence, and to administrative work, and writing in adult education and general studies. His mental outlook was characterized by versatility, impatience with compartmentalized knowledge, originality in attacking new and unconventional fields, and a capacity to clarify the intricate and infuse life into his teaching and writing. Portrait.—A. G. Bills (Chicago).

4419. Boda, S. v. Vereinfachte Korrelationsberechnung. (Simplified correlation computation.) *Industr. Psychotech.*, 1936, 13, 243-246.—R. R. Willoughby (Brown).

4420. Burt, C. Methods of factor analysis with and without successive approximations. *Brit. J. educ. Psychol.*, 1937, 7, 172-195.—The author compares Kelley's "new method" of factor analysis with those of Thurstone and Hotelling, and concludes they are essentially similar though based on moments of different level, first and second. He proposes a newer method based on higher moments, which reaches the same results without the necessity of laborious successive approximations. He advocates consistent use of covariance rather than correlation as basic data.—K. M. Cowdery (Stanford).

4421. Dashiell, J. F. Manual to accompany *Fundamentals of General Psychology*. Boston: Houghton, Mifflin, 1937. Pp. viii + 117. \$0.80.—A manual which follows the chapter headings of the textbook. It contains study hints and study exercises.—D. Shakow (Worcester State Hospital).

4422. Fryer, D., & Henry, E. R. *An outline of general psychology*. (Rev. ed.) New York: Barnes & Noble, 1937. Pp. 229 + xliii. \$0.75.—Some passages have been rewritten, and the material has been brought up to date; the viewpoint, scope, and arrangement remain unchanged.—R. R. Willoughby (Brown).

4423. Masson-Oursel, P. L'Inde a-t-elle fait une psychologie? (Has India created a psychology?) *Scientia, Bologna*, 1937, 61, 222-225.—The concept of mental facts in India is of something produced by vital activity, not something given to begin with. Therefore the Indian attitude admits a great number

of psychologies, which are all of the nature of techniques rather than sciences. All are concerned with the attainment of ideal states and experiences, and not with the science of common ones.—D. W. Chapman (Recorder's Court, Detroit).

4424. Molina, E. A tour through probability domains. *Sci. Mon.*, N. Y., 1937, 45, 55-59.—O. P. Lester (Buffalo).

4425. Myers, C. S. *In the realm of mind*. New York; Cambridge: Macmillan, Cambridge Univ. Press, 1937. Pp. 316. \$2.50.—This is a collection of nine separate lectures delivered by the author. The content of each is indicated by its title: the help of psychology in the choice of a career; the human factor in accidents; the psychology of musical appreciation; a psychological regard of medical education; the modern development of social psychology; towards internationalism; psychological conceptions in other sciences; the absurdity of any mind-body relation; the nature of mind.—H. Schlosberg (Brown).

4426. Nordmann, J., & Payeur, P. Au sujet d'un nouvel adaptomètre. (Concerning a new adaptometer.) *Ann. Oculist., Paris*, 1936, 173, 177-197.—In order to make the investigation of the light sense accessible to the daily routine of the practitioner, the authors have designed a very simple and inexpensive apparatus with which they can make a quick check of the patient's sensitivity to light. It consists of an exposure meter which has at one end a light-tight eyepiece, and at the other a ground glass. Inside the tube is a disk bearing two circular targets, a white one with a number 1 and a green one with a number 2. The illumination of these targets can be changed by turning the movable parts of the tube which opens and closes a V-shaped diaphragm with a photometric wedge. A scale on the tube enables one to determine the relative amount of illumination, the illumination being maximal when the scale is at 10 and minimal when it is at 1. The source of light illuminating the ground glass at the end of the tube is not standardized, and the normal values under given conditions must therefore always be established by examining a test subject (the examiner, if his light sense is normal). The examination consists in determining the point where the green target disappears, starting the examination from the maximum of illumination and reducing it gradually. This point is reached when the green spot under reduced illumination does not reappear after 20 seconds. The test has to be performed at least 4 times, the first not being taken into account in calculating the average value. The examination of 126 normal and pathological cases and the

comparison of the results with those obtained with a standard adaptometer (Nagel), showed that the small adaptometer is reliable and satisfactory.—*H. Burian* (Dartmouth).

4427. Pudar, H. *Die Seele*. (The mind.) Leipzig S 3, Cölitzer Str. 12: H. Pudar, 1937. Pp. 8. M. 0.60.—*R. R. Willoughby* (Brown).

4428. Purdy, D. M. *The biological psychology of Kurt Goldstein*. *Character & Pers.*, 1937, 5, 321-330.—The basis of this discussion is Goldstein's *Der Aufbau des Organismus*. The method used by Goldstein is essentially that of Hughlings Jackson. The implications for psychology which Purdy wishes to stress are the following: (1) Goldstein's findings are the most decisive evidence of all against reflex or elementaristic theories of human behavior. (2) They indicate that the behavior of a patient with brain injury tends, in a way, to approach that of the primitive organism. (3) They suggest that the term "ego" may be given a very definite scientific meaning in terms of organization of behavior. (4) They oppose the theory of local specificity of function in the nervous system and favor a "figure-ground" structure in nervous processes. And (5) they favor the concept that sense perception, even in its simplest forms, is not determined wholly by physico-chemical processes but rather is a function of the entire organism.—*M. O. Wilson* (Oklahoma).

4429. Rogge, H. C. *Das Bewusstsein*. (Consciousness.) *Zbl. Psychother.*, 1936, 9, 344-361.—The term *consciousness* is used for two different conditions: the activity state and the ego or control feeling, which is the highest expression of the human entity. The activity state is localized in the diencephalon, and in animals subserves nutrition, reproduction, assertion against the environment, and the activities of the developmental urge. It radiates into the encephalon, producing the ego feeling. Consciousness is localized in the encephalon. There are, however, activity states which are not combined with ego feeling (higher reflexes and instinctive acts). The ego feeling with its constituent energies (assertion, individual and sexual, herd instinct, and dereistic factor) is the psychic expression of the person's life energy. It remains changeless until old age, when the life energy declines, and it ceases with death. The origins, development, functions, associations, and inhibitions of the components of the ego feeling are discussed.—*M. E. Morse* (Baltimore).

4430. Ruch, F. L. *Psychology and life*. New York: Scott, Foresman, 1937. Pp. 679.—The present elementary textbook seeks to meet the needs and interests of college students as these have been revealed by a rating scale filled in by students, administrators, and former students. The sequence of chapters is as follows: Part I, the subject-matter of psychology, individual differences, personality and its measurement, the origin of individual differences, intelligence; Part II, emotions, emotional development, motivation, the control of personal-social behavior, dynamic factors in personality;

Part III, psychology and personal problems, psychology and social problems; and Part IV, attention and perception, the special senses, learning, the management of learning, thinking and language, accuracy of thought. Each part is introduced by half-tones illustrating topics to be discussed. Lists of recommended readings and source references are given.—*W. S. Hunter* (Brown).

4431. Satō, K. [On the psychological description.] *Jap. J. Psychol.*, 1937, 12, 55-67.—By some historical investigations the author points out how incomplete the psychological description hitherto used has been. Descriptive terms represent the analytical process of the experience described; and our verbal description is after all a kind of behavioral response. Described responses are, of course, not the whole of the experience, but as they are the starting point of our researches it is necessary for us to be much more careful in observations of our daily behavior, which have long been neglected in this line of study. English summary.—*R. Kuroda* (Keijo).

4432. Schlosberg, H. *Reaction-time apparatus*. *J. genet. Psychol.*, 1937, 50, 47-61.—The author tested nine instruments of seven different types, using constant intervals and comparable conditions for each instrument. To furnish the constant intervals a simple gravity timer was constructed. To adapt this time to certain instruments a balanced relay was devised. The types of instruments tested were: Delabarre chronograph, Hipp chronoscope, Dunlap chronoscope, pendulum chronoscope, Standard Electric Time Company stop-clock, Cenzo impulse counter, Jasper and Andrews vacuum-tube chronometer. Data obtained in testing these instruments are presented and discussed. The Delabarre chronograph was the only instrument without an error. The Dunlap chronoscope had the lowest variability, but a constant error of -5 ms. For careful work all the remaining instruments should be checked frequently on intervals of known duration. Properly controlled, each instrument has its own advantages and limitations. The author recommends that these results, which are based on measurements of individual instruments, should be generalized with great caution.—*E. Heidbreder* (Wellesley).

4433. Spoerl, H. D. *Swedenborg: a psychological pioneer*. *Psychol. Dig.*, 1937, 2, 70-75.—Among Swedenborg's contributions to modern thought was his work of synthesizing the psychological knowledge of his time. He did not stop with this, but proposed many speculations that have been confirmed by more recent psychology. Swedenborg's psychology was similar in many respects to Fechner's views; it stressed physiology, the unconscious, and personality, and in addition provided a metaphysical framework. His theories have considerable bearing on present-day discussions of the concept of cause in science.—*H. D. Spoerl* (American International College).

4434. Stone, C. P. A sand-tube obstruction apparatus. *J. genet. Psychol.*, 1937, 50, 203-206.—The author describes and suggests ways of using an apparatus unit designed to make use of the rat's digging proclivities in overcoming an obstruction placed between himself and a specific desideratum.—E. Heidbreder (Wellesley).

4435. Stone, C. P. A paper-window obstruction apparatus. *J. genet. Psychol.*, 1937, 50, 206-209.—The author describes some of the ways in which he has employed the paper window as an obstruction apparatus in studies of learning and motivation in rats. He recommends it because it has the characteristics of a genuine barrier, and yet can be overcome again and again by rats of any age beyond weaning without setting up undesirable fear or avoidance reactions toward it.—E. Heidbreder (Wellesley).

4436. Thumb, N. Der prognostische Wert psychologischer Statistiken. (The prognostic value of psychological statistics.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 705-712.—Statistical data have two chief values, descriptive and prognostic. The prognostic value of psychological statistics depends on the existence of marginal values for the relative frequencies and on the continuance of the same marginal values when part of the data or samplings are considered alone. If these two conditions are not fulfilled the data cannot be used for prognostic purposes.—H. Beaumont (Kentucky).

4437. Thumb, N. Zur Problematik der Faktoren-theorien. (The problems of factor theories.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 712-721.—A description of Thurstone's multiple-factor analysis, leading to the practical conclusions that the reliability of a test series demands that certain items be kept constant, but that the complexity of job requirements makes it desirable to use a large variety of items. This is true only if the tests correlate equally highly with performance on the job (have equal validity). This problem has been met by the factor theory: Spearman developed test series containing highly heterogeneous items, while Thurstone favors the use of a large number of similar items.—H. Beaumont (Kentucky).

4438. Tremelloni, R. [Elementary treatise on statistics. Vol. VI. Social statistics. Scientific planning of the work.] Milan: A. Giuffrè, n.d. Pp. viii + 30. L. 5.—On the basis of a scheme of the principal objectives that proposes the scientific planning of the work and discusses the difficulties which interfere with a measurement of efficiency, the author passes to a treatment of the methodological part, viz., the methods of measurement of technical progress; the methods of statistical estimate of a worker's performance; the efficiency of enterprise; standardization; industrial concentration; and industrial concentration and industrial research. He presents the figures on workers' productiveness in the principal industrial countries.—L. Canestrelli (Rome).

4439. Wojciechowski, J. Un nouveau tachodometre. (A new tachodometer.) *Travail hum.*, 1937, 5, 212-215.—The term was suggested by Lahy as a name for apparatus which tests judgment of velocity and distance. The present model includes two toy cars moving toward or away from the subject and two moving transversely. The former are controlled by the subject. Records are made of the number of "collisions" and errors, i.e. failing to stop when a red light appears. The distribution of scores is given, but no data on validity are available as yet.—H. E. Burt (Ohio State).

[See also abstracts 4554, 4556, 4686, 4727.]

NERVOUS SYSTEM

4440. Buckley, A. C. Myelination in the central nervous system of the albino rat treated with thymus extract (Hanson). *J. comp. Neurol.*, 1937, 66, 449-457.—Myelination in the spinal tracts of thymus-treated rats of the sixth generation is equivalent in young at 6 postnatal days to that of normal animals of 13 days. In thymus-treated rats of the tenth generation myelination at 6 days is equivalent to that in normal animals at 20 days. All of the tracts of the spinal cord except the corticospinal and the dorsolateral show myelination within 24 hours after birth, which undoubtedly indicates a high degree of precocity.—C. P. Stone (Stanford).

4441. Cazzamalli, F. [The cerebropsychoradiant reflex as a method of psychobiophysical exploration.] *Atti Soc. ital. Progr. Sci.*, 1935, 3, 182-216.—L. Canestrelli (Rome).

4442. Döllken, —. Die Pyramidenbahnen. (The pyramidal tracts.) *Dtsch. med. Wschr.*, 1937, 63, 885-891.—These studies present a delimitation of the functions of the pyramidal and extrapyramidal systems.—P. L. Krieger (Leipzig).

4443. Gerard, R. W. The nervous system. (Sound film.) New York: Erpi Picture Consultants, Inc., 1937. 400 feet, 16 mm. \$50.00 sale.—This talking film gives a graphic introduction to the structure and function of the cerebrospinal nervous system. The major parts of the frog, cat and human brain are illustrated and compared. The concept of the spinal reflex arc is developed with animated diagrams, and the effects of transecting the dorsal and ventral roots of the cord are exhibited in a cat with anesthesia and paralysis of the hind limbs. Nervous impulses are diagrammatically represented as areas of local excitation spreading along separate fibers. Depolarization of the nerve fiber is explained and illustrated. Nervous impulses from the paw and cerebrum of the cat and from the human brain are led to an oscillograph and loudspeaker, where they are made visible and audible. The film closes with a brief review of the role of nervous impulses in behavior.—L. F. Beck (Oregon).

4444. Jasper, H. H. Electrical signs of cortical activity. *Psychol. Bull.*, 1937, 34, 411-481.—Review of the history of studies on brain potentials, physical techniques (amplifier-oscillograph systems, bipolar

and monopolar leads, recording through the skull and scalp), general properties of spontaneous cortical potentials (automatism, bioelectric patterns and cytoarchitectonic structure, synchronization, periodicity), normal human electroencephalogram (alpha rhythms, beta rhythms, individual differences), phylogenetic relationships, ontogenetic development, physicochemical environment (temperature, blood supply, oxygen and carbon dioxide, sodium, potassium, and calcium ions, volatile anesthetics, stable anesthetics, convulsant drugs), the E. E. G. in neurologic and psychiatric disorders, relations to the efferent system, generalized excitation and sleep, and specific stimulation effects (direct electrical stimulation, evoked potentials with afferent stimulation, depression of spontaneous activity, stimulus after-effects, adaptation). Bibliography of 212 references.—R. H. Brown (Clark).

4445. Jasper, H. H., Bridgman, C. S., & Carmichael, L. An ontogenetic study of cerebral electrical potentials in the guinea pig. *J. exp. Psychol.*, 1937, 20, 63-71.—The brain potentials of the guinea pig first appear when the age of 48-56 days of gestation has been attained. No definite ontogenetic trend, either in the limits of the total frequency range or in the frequencies which are most characteristic of the different ages, was discovered. There is, however, an indication that a secondary grouping appears more regularly in the older animals. The average amplitude of the characteristic frequencies at any age shows an irregular yet definite increase with age. Definite though not invariable effects of stimulation on the character of the cortical electrogram were noted, occurring as early as the 60th day of gestation. The guinea pig brain first exhibits electrical activity at a time when behavioral indications also point to maturation of higher nervous centers.—H. W. Korn (Pittsburgh).

4446. Jordan, H. J. Einige allgemeine Gesichtspunkte aus der vergleichenden Physiologie der Nervenleitung. (Some general viewpoints concerning the comparative physiology of nervous conduction.) *Biol. Zbl.*, 1937, 57, 149-166.—Experiments on the nerves of snails demonstrate a relative refractory phase, but no absolute refractory period. Other differences between the nerves of snails and mammals are indicated.—E. R. Hilgard (Stanford).

4447. Pennington, L. A. The function of the brain in auditory localization. II. The effect of cortical operation upon original learning. *J. comp. Neurol.*, 1937, 66, 415-442.—48 rats were trained on an elevated Y-maze to respond to the direction from which a noise came. Regional cortical operations were performed on the individuals of this group so as to involve all parts of the cortex (taking the group as a whole). Amnesia for this localizing habit appeared when there was bilateral destruction within a small posterior-ventral area estimated to include approximately 15% of the total cortex. Analysis of the behavioral data tended to indicate

that the greater the extent of bilaterality of cortical lesion in this critical area the greater the degree of amnesia during postoperative retention tests. No animal suffered complete loss of the auditory cortex, as delimited in this study both by anatomical and behavioral data methods, hence there is no evidence on the possibility of reacquisition of the localizing habit in the absence of the cortical auditory centers. Animals with small portions of the auditory cortex still intact relearned the localizing habit in normal learning time. As yet, however, the evidence from relearning is inconclusive with respect to the theory of mass action.—C. P. Stone (Stanford).

4448. Pennington, L. A. The function of the brain in auditory localization. III. Postoperative solution of an auditory spatial problem. *J. comp. Neurol.*, 1937, 67, 33-48.—25 untrained rats with lesions in the auditory area of the cerebral cortex were trained postoperatively to localize a noise on a Y-shaped elevated maze. Their mean rate of learning was compared with that of 48 normal animals. No evidence of retardation in the operated animals was found. This is remarkable, because a previous study had demonstrated marked amnesia in postoperative retention tests. The author suggests tentatively that "either an all-or-nothing principle of neural function may exist within the auditory cortex, or subcortical mechanisms may mediate the acquisition of the localizing response acquired without retardation after cortical operation."—C. P. Stone (Stanford).

4449. Richter, W. Über die Bedeutung des Zeitintervalls zwischen erregenden und hemmenden Reizen. (The significance of the time interval between the excitatory and inhibitory stimuli.) Glatz: Genossenschafts-Druckerei, 1936. Pp. 21.—R. R. Willoughby (Brown).

4450. Smith, K. U. The postoperative effects of removal of the striate cortex upon certain unlearned visually controlled reactions in the cat. *J. gen. Psychol.*, 1937, 50, 137-156.—Complete removal of the visual cortex in six cats was followed by the appearance of typical defects in the ability to avoid obstacles, to locate food, to climb stairs, and to descend from elevated surfaces on the basis of visual cues. Closure of eyelids to movement of a card or the experimenter's hand occurred in five animals under extremely high retinal illumination, but not under normal conditions of illumination. Eyelid closure in the conditions stated is taken as evidence of a rudimentary type of "object perception." Forced lateral deviations of the eye to a rotating striped pattern occurred in five animals after the operations. This fact points to the existence of movement and pattern vision in cats lacking the visual cortex. Visual placing reactions of the forelimbs were abolished in six animals under conditions of stimulation similar to those used in testing eye movements. This fact indicates critical division of function between the nervous mechanisms of pattern vision mediating ocular reactions and those controlling the visually determined responses of the

trunk and forelimbs. In pattern, movement, and object vision in the cat, the subcortical neural mechanisms of the ocular reactions seem to function in cooperation with more highly differentiated cortical processes. The subcortical neural pathways of the central visual system in the cat retain in part the localizing functions which are mediated entirely through the mid-brain at more primitive levels in phylogeny.—*E. Heidbreder* (Wellesley).

4451. White, R. R. An experimental method for the production of decerebrate rigidity in dogs by vascular occlusion. *J. nerv. ment. Dis.*, 1937, 85, 663-667.—"An adjunct to the method of Pollock and Davis is described for producing decerebrate preparations in dogs. It consists of ligation of all the branches of the carotid bulb in the neck on both sides as well as the common carotid arteries and basilar artery."—*C. R. Atwell* (Boston Psychopathic Hospital).

[See also abstracts 4467, 4476, 4512, 4513, 4523, 4535.]

RECEPTIVE AND PERCEPTUAL PROCESSES

4452. Autrum, H. Über Lautäusserungen und Schallwahrnehmung bei Arthropoden. I. Untersuchungen an Ameisen. Eine allgemeine Theorie der Schallwahrnehmung bei Arthropoden. (Concerning sound production and tone perception in arthropods. I. Investigations on ants. A general theory of tone perception in arthropods.) *Z. vergl. Physiol.*, 1936, 23, 332-373.—Although stridulatory movements were observed in two *Myrmica* species, neither a sensitive condenser-microphone within 1-2 mm of the substrately-insulated surface on which the excited ant rested, nor a special supersonic detector permitted the amplification of an audible tone. Bodily amplification of the vibration is naturally too slight for air conduction. Substratal conduction occurs, since a "chirping" sound issued from the loudspeaker when the ant's body touched the microphone plate. This occurred during feeding and under other conditions, but never affected the behavior of other ants. Loudspeaker tones did not affect an ant (resting on a rubber-insulated netting) unless the insect was within $\frac{1}{4}$ wave-length of the reflecting surface, when the resonance of antennal hairs excited a response. It is concluded that tones reflected perpendicularly to the substratum are inadequate for insects lacking a tympaniform auditory apparatus. The great restriction of "auditory" sensitivity in these insects was further indicated by the fact that conditioning did not appear in *F. rufa* ants for which loudspeaker tones accompanied sugar water.—*T. C. Schneirla* (New York University).

4453. Becker, H., & Fröhle, H. Untersuchungen über die Hautsensibilität. III. Über die Sensibilität der druckpunktfreien Haut. (Studies on skin sensitivity. III. The sensitivity of skin free from pressure points.) *Pflüg. Arch. ges. Physiol.*, 1937, 238, 592-597.—Several pressure points were anesthetized and the sensitivity of the area between

these points determined. A considerable increase in threshold was observed. A marked increase in threshold was also observed when this area was anesthetized, regardless of whether the neighboring pressure points were anesthetized or not. Thus the pressure point-free skin possesses its own sensitivity; the nerve fibers supplying it appear to run along with the fibers supplying the pressure points.—*M. A. Rubin* (Clark).

4454. Bender, M. B., & Strauss, I. Defects in visual field of one eye only in patients with a lesion of the optic radiation. *Arch. Ophthalm.*, Chicago, 1937, 17, 765-787.—A brief review of anatomical studies of localization indicates that determination of functional changes associated with brain tumors may add further information. Of 100 cases in which tumors involved the optic radiations, 10 were found to have unpaired temporal crescentic defects. These are reported in detail. Several showed concomitant defects in the field for color preceding changes in the field for white. 4 showed unpaired crescentic relative scotomas mesial to the absolute scotomas. This suggests a lamellar arrangement of the fibers of the optic radiation. Although the tumors had various locations, the defect always started with contralateral unpaired peripheral crescentic defects and gradually approached the center; central vision was frequently spared. When regression of the defect occurred, the order was reversed—central vision was recovered first, peripheral temporal vision last. It is suggested that the visual elements are less numerous in the peripheral retina and that the corresponding portion of the optic radiation is much less extensive, with each fiber conducting impulses from several elements, so that any impairment of the functioning is likely to result in complete loss of vision. Elsewhere partial interference may occur with loss, for instance, of color vision without producing an absolute scotoma.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

4455. Brunswik, E. Prüfung und Übung höherer Wahrnehmungsleistungen (Dingkonstanz). (The measurement and exercise of complex observational processes—thing-constancy.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 684-689.—Considerable individual differences exist in the ability to perceive accurately the characteristics of objects presented under changing conditions. Psychotechnical experiments usually limit themselves to thing-constancy with varying positions in a frontal-parallel plane, but it is possible to make the problem more complex by varying other characteristics: equal volumes contained in different vessels or split into different parts; equal weights of greater and lesser specific gravity, etc. It was found that constancy was greatest for equal areas of changing shapes and for Gestalten of changing areas. Practical applications include: the volume of larger boxes is usually overestimated, that of larger tubes underestimated; the total volume of 15 large eggs is underestimated compared to the equal total volume of 18 smaller ones; prices in round numbers of shillings were

overestimated by 67% of the female subjects when compared to fractional prices. The ability to perceive equal objects as such is subject to improvement through exercise. It develops rapidly until the age of 10-15, then declines with adulthood.—*H. Beaumont* (Kentucky).

4456. *Clark, B.* Photographic measures of accommodative-convergence. *Amer. J. Optom.*, 1937, 14, 202-215.—Photographic records of eye movements of 20 university students were made during rhythmic changes in fixation between 33 and 244 cm. No significant differences were found between movements during binocular fixation and during accommodative convergence when the test object was seen with one eye only. Individual differences were considerable, and for the same observer successive tests showed variability in position of as much as 7 prism diopters when binocular single vision was reported. Associated movements occurred before the correct divergent or convergent movements, especially during binocular fixation. No differences were noted in behavior of dominant and non-dominant eyes, indicating that tests which force choice of one eye suggest greater differences than are found in normal circumstances. Comparison with data reported elsewhere indicates that the times required for accommodation and for convergence are not significantly different.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

4457. *Clarke, R. G.* A note on color. *J. educ. Psychol.*, 1937, 28, 305-307.—"Color sensation is due to distinction of the observer of different photons varying in energy. This is caused by selective photochemical action of the retinal molecules. Black is not an affecter of retinal molecules—it is a lack of sensation, not a sensation. Retinal response to external stimuli is katabolic. After-images are anabolic processes restoring the destroyed retinal molecules."—*A. W. Melton* (Missouri).

4458. *Dworkin, S., Hutchison, G. A., & Katzman, J.* Tactile and tremor perception. *Ann. Otol., etc., St. Louis*, 1936, 45, 840-844.—It was observed that cats were able to perceive intense sounds after complete cochlear destruction. It was demonstrated that the fur of the animal was the source of the tremor reception.—*D. J. Ingle* (Mayo Foundation).

4459. *Haimann, E., & Schenk, E. W.* Untersuchungen über die Hautsensibilität. II. Über Schmerzsummutation und die Veränderungen der Schmerzschwellen nach Insulin und Alkohol. (Studies on skin sensitivity. II. Pain summation and alterations of pain thresholds after insulin and alcohol.) *Pflüg. Arch. ges. Physiol.*, 1937, 238, 584-591.—Pain thresholds of sensory nerves to frequent condenser discharges were obtained. Evidence from these experiments supports the results obtained with rectangular pulse stimulation reported in the first paper of this study. Alterations of the pain thresholds by mild hypoglycemia and light alcohol narcosis are described, and the results are offered as further evidence that the pain thresholds are central thresholds.—*M. A. Rubin* (Clark).

4460. *Hauck, A., & Neuert, H.* Untersuchungen über die Hautsensibilität. I. Die Schmerzschwellen bei elektrischer Reizung des sensiblen Nerven. (Studies on skin sensitivity. I. Pain thresholds on sensory nerve stimulation.) *Pflüg. Arch. ges. Physiol.*, 1937, 238, 574-583.—Pain thresholds on stimulating a sensory finger nerve electrically (rectangular pulses) at various intensities and frequencies were determined. Pain was not evoked by a single make and break shock, but required repetitive stimulation for a response. This indicates that summation is necessary for the sensation of pain. The authors interpret their threshold curves as favoring the view that pain is a central phenomenon, and that the thresholds measured are not those of the peripheral neurons but those of the central neurons.—*M. A. Rubin* (Clark).

4461. *Hoche, A. E.* Vom Sinn des Schmerzes. (The meaning of pain.) Munich: J. F. Lehmann. Pp. 33. M 1.—Pain, originally a useful aid to physical life, accompanies the existence of all creatures capable of feeling, because of its persisting tendency. Through its tendency to increase and develop, often independently of its primary purpose, it attains a disproportionate extension and a uselessly high degree. The great development of the human brain in comparison with the rest of the body has allowed pain to become, in addition to its indispensable role of mentor, an enemy in wider relationships.—*A. E. Hoche*.

4462. *Homma, T.* [The law of Prägnanz in the process of drawing figures.] *Jap. J. Psychol.*, 1937, 12, 112-153.—The subjects, including 81 students of psychology and 5 children of a kindergarten, were required to trace a figure on a piece of paper, usually with a pencil 4-12 seconds after it had been presented to them. 55 series of figures were used in this experiment. The drawing process as a sort of mental action has a general and common tendency; the process is under the control of the law of simplicity. This law can be regarded as almost the same as Wertheimer's factors of perception, viz., proximity, equality, continuation and good shape. From the standpoint of his experimental work the author especially enumerated spatial order, Cartesian coordinates, size, enclosure, intensity of impression, symmetry, monotony, and centricity as the most important factors for the control of the drawing tendency. English summary.—*R. Kuroda* (Keijo).

4463. *Jablonski, W.* Ricerche sulla percezione delle forme nei micopi. (Studies of form perception by the nearsighted.) *Arch. ital. Psicol.*, 1937, 15, 70-81.—Experiments were made on the development of visual forms for two types of nearsighted subjects, those accustomed and those unaccustomed to glasses. Both groups were without glasses for the experiments. The subjects were required to reproduce designs seen from progressively shorter distances, beginning well outside the limit of recognition. Such differences as were shown between the groups were not clear cut, and the author suggests further experiments using objects rather than de-

signs. Plates and a bibliography are included.—*C. J. Herrick* (Pennsylvania).

4464. Jones, L. A. **Colorimetry: preliminary draft of a report on nomenclature and definitions.** *J. opt. Soc. Amer.*, 1937, 27, 207-213.—This report represents an attempt to harmonize the nomenclature of greatest importance in the field of radiometry, photometry and colorimetry. The material is separated into three distinct categories. "These categories may be designated as physical, psychophysical, and psychical, and in many cases a quantity belonging to one of these categories has its direct correlate in the other two." Distinction is made between terms referring to a specific quantity and those referring to the process. All terms relating to radiant energy are based on the root *radi*, while all photometric terms are based upon the root *lumin*. Tables and figures show symbols and defining equations, units, and interrelations between the categories of quantities. Final formulation of the verbal definitions of the quantities is not given. Sensation (psychical) terms are given verbal formulation.—*R. J. Beitel, Jr.* (American Optical Company).

4465. Kido, M., & Yoshida, M. [On the common properties of olfaction.] *Jap. J. Psychol.*, 1937, 12, 95-111.—Experimental researches were done with three to ten subjects, students of psychology. Being tested with an association method, with 66 kinds of aromatics, two persons showed an agreement of about 60% between these aromatics and their associated things. These things were classified according to taste, touch, temperature, etc. The relations between these 66 materials and the feeling of pleasantness-unpleasantness, between sounds and six kinds of aromatics, and between colors and 18 kinds of aromatics, each three of which belong to the six fundamental odors of Henning, were studied. The color and odor test was repeated four times with intervals of one week, in order to ascertain the constancy of judgment, but the variability found could not be explained. English summary.—*R. Kuroda* (Keijo).

4466. Langer, W. **Über den Geschmackssinn in der Schwangerschaft.** (The taste sense in pregnancy.) Rostock: Hinstorff, 1936. Pp. 20.—*R. R. Willoughby* (Brown).

4467. Lashley, K. S. **The mechanism of vision. XIII. Cerebral function in discrimination of brightness when detail vision is controlled.** *J. comp. Neurol.*, 1937, 66, 471-480.—The lenses were removed from the eyes of two albino rats without destroying the bulbs or the retinae. Subsequently they were trained to differentiate light from darkness. Removal of the striate areas of the cortex abolished this discrimination habit, as it does in animals with eyes intact. From these results the author concludes that "the postoperative loss of similar habits in animals with normal eyes is not due to interference with their detail vision."—*C. P. Stone* (Stanford).

4468. Obonai, T., & Asano, T. [Contributions to the study of psychophysical induction. 9. The study of the retinal irradiation.] *Jap. J. Psychol.*,

1937, 12, 1-12.—The object of the present investigation was to analyze the negative irradiation as well as the positive one. The results taken from ten subjects show that the white object on the black ground under daylight produces a positive irradiation, and both the white object on the black ground and the black one on the white ground do so only when the line of the object is thin; at other times the line disappears as a result of its assimilation with the ground. When the black object on the white ground is smaller than a certain size, it brings about a negative irradiation. The inflection point from a positive irradiation to a negative one or from negative to positive differs according to the intensity of light. English summary.—*R. Kuroda* (Keijo).

4469. Ogasawara, J. [Phenomenal pathway of the apparent movement.] *Jap. J. Psychol.*, 1937, 12, 205-208.—Two small lights, one of which makes its appearance 2.9 seconds after the other is put out, were used as stimuli in a dark room on either side of the fixation point and at various heights and horizontal distances from it. As different experimental conditions the distance between the two lights or between the subject and the fixation point was sometimes altered; the size of the fixation point was changed, and once the fixation point itself was taken away. The movements observed were one just behind the fixation point, those of curved types, and one along a straight line. English summary.—*R. Kuroda* (Keijo).

4470. Oloff, H. **Die Funktionsprüfung des Auges unter besondere Berücksichtigung der Störungen des Farbenseins.** (Testing of the optic functions, with special relation to disturbances of color vision.) Berlin: Springer, 1937. Pp. 199. RM. 7.50.—*R. R. Willoughby* (Brown).

4471. Rauth, J. E., & Sinott, J. J. **A new eidetic phenomenon.** *Child Developm.*, 1937, 8, 112-113.—"An eidetic image can be inverted phenomenally by rotating the screen 180 degrees." By this means subjects were able to perceive from their reoriented images the meaning of pictures which were incomprehensible when presented in an inverted position.—*F. D. McTeer* (Wayne University).

4472. Rikimaru, J. [Taste differency for phenylthio-carbamide, with special reference to its hereditary nature.] *Jap. J. Psychol.*, 1937, 12, 33-54.—Studying the phenomenon of taste deficiency with some Japanese and Formosans, the author found it to be a simple autosomal recessive under the control of Mendel's law. Both taste blindness and color blindness are recessively inherited, but an important difference between them demonstrated here is the fact that the former has no tendency to sex-linked inheritance, as the latter does. English summary.—*R. Kuroda* (Keijo).

4473. Robertson, C. J. **Effect of fatigue on the adjustment of the eye to near and far vision.** *Arch. Ophthal.*, Chicago, 1937, 17, 859-876.—Results are reported of determinations of speed of adjustment for near and far vision as determined by a tachistoscopic method. Norms were determined for five

year age groups from 20 through 49. For the 20 to 24 year group, maximum time regarded as normal for near to far adjustment was 0.89 sec.; for far to near, 0.59 sec.; and from near to far to near, 1.349 sec. Maxima were about 1/10 sec. greater for each successive 5-year group. Fatigue tended to increase the time required by about 1/10 sec. Muscle imbalances, subnormal or unequal acuity, astigmatism and myopia are apparently factors in slowing down accommodative adjustments.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

4474. Wada, Y. [The influence of the construction of series upon time errors.] *Jap. J. Psychol.*, 1937, 12, 209-210.—The author intended to compare the effect of various kinds of time interval in one series of tests at a time upon time errors with that of only one kind of time interval. Errors were found to be more numerous in the former. English summary.—*R. Kuroda* (Keijo).

4475. Welsh, J. H., & Osborn, C. M. Diurnal changes in the retina of the catfish, *Ameiurus nebulosus*. *J. comp. Neurol.*, 1937, 66, 349-359.—No significant changes in the retinal pigment of the catfish occur under conditions of constant darkness or constant illumination. Furthermore, when kept constantly illuminated for 24 to 48 hours the lengths of the rods and cones are those of the typical light-adapted retina. But when kept in constant darkness for periods of 24 to 48 hours the lengths and the positions of the rods and cones are characteristic of extreme darkness adaptation during the night and light adaptation during the day. The cause and functional significance of this persisting "diurnal rhythm" in the absence of recurring external light stimulation are not understood.—*C. P. Stone* (Stanford).

4476. Wiley, L. E. A further investigation of auditory cerebral mechanisms. *J. comp. Neurol.*, 1937, 66, 327-331.—From experiments on 9 rats involving bilateral destruction of the auditory area of the cortex, the author concludes that these destructions do not interfere with the formation of a simple auditory discrimination habit. Previous experiments had shown that removal of large amounts of the cerebral auditory areas in rats after this auditory discrimination habit had been mastered led to impairment or loss of the habit. The results of these experiments are similar to those reported by Lashley for the simple visual discrimination habit.—*C. P. Stone* (Stanford).

[See also abstracts 4426, 4439, 4447, 4448, 4450, 4510, 4520, 4521, 4527, 4539, 4567, 4651, 4673, 4736, 4771, 4862, 4864.]

LEARNING, CONDITIONING, INTELLIGENCE

(incl. Attention, Thought)

4477. Anderson, A. C. The effect of equalizing reward upon the breakdown of a discrimination habit, and its bearing upon reminiscence. *J. comp. Psychol.*, 1937, 23, 421-437.—After mastering a

discrimination habit, white rats were rewarded for both correct and incorrect responses. They thus had no incentive for continuing to respond correctly. The above condition was introduced for different groups of rats after different amounts of practice on the discrimination problem. Disintegration of the habit occurred slowly. The time required for disintegration was longer the greater the amount of practice prior to introduction of dual reward. "It seems that the breakdown of a discrimination habit, under the conditions described . . . is related to the degree of learning much as is, presumably, the breakdown of learning acquired and forgotten under the ordinary conditions of life." The results lend support to the concept of "habit as drive," the habit apparently providing its own motivation. It is suggested that interfering habits built up after the changed conditions account for the disintegration. The relation of this view to theories of reminiscence is discussed. Bibliography.—*N. L. Munn* (Peabody).

4478. Blumenfeld, W. *Intelligenzprüfungen und Denkpsychologie*. (Intelligence tests and the psychology of thinking.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 663-670.—The measurement of intelligence on a quantitative basis has progressed satisfactorily, but there has been little progress along intensive lines, due to the lack of a practically useful theory of thinking. This process consists of modifications occurring in the material and in the individual. Material modifications include: I. Searching for anticipated contents (in the observational field or in one's experience). II. Formative processes: (1) modification of present material by isolation of elements, analysis or breaking up into Gestalten; (2) combination by grouping, supplementing or constructing; (3) modification of material by rearrangement, reformulation or re-emphasis. III. Comprehending processes: (1) recognition of content, relationship or process; (2) understanding meaning. Modifications of the individual include: (1) narrowing processes: concentration, resistance to distractions, elimination of expectation; (2) attitude: choice and criticism; (3) effects of success and failure. Low scores on intelligence tests may be due to any of these factors, and it seems important to distinguish these types of failures.—*H. Beaumont* (Kentucky).

4479. Boda, S. *Zur Methodik der "reinen Verstandesprüfungen"*. (The methodology of "tests of pure intelligence.") *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 670-683.—Intelligence tests are capable of measuring many special intellectual abilities, but the problem remains of measuring the general ability involved. This cannot be done in exact figures, but is nevertheless possible by the rank order method. Such data, when interpreted with due consideration of the subject's interests, work habits, etc., are of practical significance in determining logical reasoning ability, etc.—*H. Beaumont* (Kentucky).

4480. Burt, H. E. A further study of early childhood memory. *J. genet. Psychol.*, 1937, 50, 187-192.—Meaningless material (20-line selections of Greek drama) was read aloud to the subject daily during infancy, beginning at the age of 15 months. At the age of 8½ years the subject's learning of some of the original material was compared with his learning of comparable material acquired *de novo*. At the age of 14 years a similar experiment was conducted with still other selections from the original material. The effect of the presentation in infancy was very marked at the age of 8½ years, but at the age of 14 the effect, while still appreciable, was considerably decreased.—E. Heidbreder (Wellesley).

4481. Carter, H. D., & Jones, H. E. A further study of affective factors in learning. *J. genet. Psychol.*, 1937, 50, 157-163.—Individual learning tests were administered to 100 college students, to check upon certain trends previously found in studies of adolescent children. The tests required the recall of pleasant, unpleasant and indifferent words in response to pictures that served as paired associates. The order of learning was pleasant, unpleasant, and indifferent words. These trends in college students are the same as those found in adolescents. They are not representative merely of a particular developmental period, but are probably representative of a wide sampling of persons in the present social environment. There is no functional relationship between the learning results and the procedures involved in classifying words or in free association to the words.—E. Heidbreder (Wellesley).

4482. Chen, H. Sex differences in simple syllogistical judgment. *J. genet. Psychol.*, 1937, 50, 3-13.—A Chinese translation of the Thurstone reasoning test, form B, was applied to 27 men and 27 women, all Chinese college students. Special care was taken to control the experimenter-subject sex relationship and to treat the numerical results by rigid statistical criteria. No statistically significant sex differences were obtained. The men, on an average, took a longer time to pass a syllogistic judgment, but committed fewer errors. The men tended to mistake right conclusions as wrong, the women to mistake wrong conclusions as right.—E. Heidbreder (Wellesley).

4483. Chen, H. Studies on Thurstone's reasoning tests. *J. genet. Psychol.*, 1937, 50, 15-25.—An analysis of Thurstone's reasoning test indicated that (1) the relative difficulty of the different arguments in terms of error scores may vary with the content, data, or category of arguments, (2) with the same data on content, difficulty in terms of both time and error scores may vary with the tall-short relationship in the argument, (3) with the same data or content, difficulty in both time and error scores may vary with the sequence of persons in the arguments. Subjects used all sorts of imaginal cues in passing a judgment, and there is practically no correlation between speed and accuracy of judgment. Time and error scores gave a correlation of .611 with college grades in physics. Chinese- and

English-speaking subjects were used; some subjects were tested individually, some in groups; some tests were given in English, some in Chinese translation.—E. Heidbreder (Wellesley).

4484. Gibson, E. J., & McGarvey, H. R. Experimental studies of thought and reasoning. *Psychol. Bull.*, 1937, 34, 327-350.—Review of literature on the nature of the thinking process, relation of thinking to other processes, and factors determining efficiency of thinking, with brief critique of methods. The nature of the thinking process is considered in terms of the effects of set and instructions upon thinking, the occurrence of the problem solution (insight vs. trial and error), causes of errors in thinking (set and past training), creative thinking, and concept formation and abstraction. There has been little recent work on the role of imagery in thinking. Experiments during the past decade tend to confirm the possibility of a motor theory of thinking. The relation between reason and emotion and between reasoning and learning should be clarified. Efficiency of thinking is influenced by training (in similar situations), length of problem, character of material, and age, but is not influenced by caffeine or sex.—R. H. Brown (Clark).

4485. Gray, W. L. The effect of forced activity on the maze performance of white rats. *J. comp. Psychol.*, 1937, 23, 475-512.—48 animals were given 20 daily trials each on a 6-section multiple-U maze. Three groups, each consisting of 8 animals (4 activity and 4 control, equated for weight, litter, sex, etc.) were trained with food as an incentive. Three other groups were punished for errors. The activity animals were given forced exercise daily. Exercise was given in motor-driven revolving drums. Time scores showed no reliable difference between the activity and control animals. Activity animals were slightly superior to the controls in terms of error scores. The difference was statistically reliable. Bibliography.—N. L. Munn (Peabody).

4486. Hertzman, M. Confidence ratings as an index of difficulty. *J. exp. Psychol.*, 1937, 21, 113-119.—Subjects studied photographs and names of 10 different men and at a later interval attempted matchings from a list of names and a new sheet bearing the 10 photographs without names and in a different order. After each match a confidence rating was made. Rank-difference correlations were obtained between difficulty ranking as determined by errors and confidence ranking where the confidence rankings were secured only from rating of correct matches. "These correlations indicate that the confidence feelings of the subjects who answer correctly parallels rather closely the difficulty of the items used, and where accuracy is perfect average confidence ratings may very well become a measure of difficulty."—H. W. Karn (Pittsburgh).

4487. Hovland, C. I. The generalization of conditioned responses. III. Extinction, spontaneous recovery, and disinhibition of conditioned and of generalized responses. *J. exp. Psychol.*, 1937, 21, 47-62.—The Tarchanoff phenomenon of the skin,

measured by a galvanometric circuit, was used as an index of response. The unconditioned stimulus was an electric shock. Conditioned stimuli were vibrotactile and auditory. Tactile CR's extinguished comparatively slowly during test trials following reinforcement. Generalized responses to a vibratory stimulus of different intensity declined in magnitude more rapidly than the CR's during testing. Testing of conditioned and generalized auditory responses after 24 hours showed more marked spontaneous recovery for the generalized responses than for the CR's. Disinhibition of extinguished responses was demonstrated when the lights in the room were turned off after some degree of differentiation between the conditioned and generalized responses had been established. When CR's were established to two widely separated frequencies of tone, and subsequently one was extinguished, testing resulted in the extinction of the response not previously extinguished, but an initial augmentation of the extinguished response, presumably as the result of "disinhibition" by the other test stimulus. With further testing this effect disappears and the extinguished response again begins to decline.—H. W. Karn (Pittsburgh).

4488. Iritani, C. [The stabilization of transient habits formed repeatedly in white rats.] *Jap. J. Psychol.*, 1937, 12, 154-192.—This study was done to learn the process of the failure of reaction to easiness which the animals reach at last after several alternations of transient habit by artificial change of conditions. During 22 months 35 rats were successively tested on three kinds of maze for three kinds of problem, viz., those to prefer the temporarily shorter path to the longer, the less obstructing to the more, and the spatially shorter to the longer. The conditions were changed alternately as soon as a weak habitual tendency had appeared, and the tests were continued until the stabilization of habit was seen clearly. From the results attained the author isolated three types of habit fixation, namely, fixation to the handy side, to the unhandy side, and to a random one. He concluded that the stabilization of animals' habits in these experiments is due to their exhaustion of adaptability. English summary.—R. Kuroda (Keijo).

4489. Kaltofen, J., & Simon, W. *Versuche zum theoretischen und gegenständlichen Denken.* (Testing abstract and concrete thinking.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 430-432.—On the basis of a statistical treatment of data obtained by giving a battery of tests involving thinking abstractly and concretely to 360 third-grade boys, the conclusion is reached that these two types of intellectual reactions represent different abilities. The difference is not so much that one depends on immediate perception and the other on memory images, but is to be found in the relationships to be grasped. In concrete thinking the two fundamentally related items are presented objectively and are open to sensory perception; in abstract thinking they are to be inferred indirectly. A slightly negative correlation exists between the abilities to

perform these two types of thinking.—H. Beaumont (Kentucky).

4490. Kappauf, W. E., & Schlosberg, H. *Conditioned responses in the white rat. III. Conditioning as a function of the length of the period of delay.* *J. gen. Psychol.*, 1937, 50, 27-45.—28 rats were trained in a simple "delayed reflex" conditioning situation in which a buzz was followed by an electric shock to the right foreleg. The purpose of the study was to determine the effect of the length of the interval between the conditioned and unconditioned stimuli. Each animal was trained at one of eight periods of delay: 1/3 sec., 2/3 sec., 1 sec., 2 sec., 4 sec., 7 sec., short variable, and long variable. Under "standard" conditions, the 2/3 and 1 sec. intervals were more favorable to the development of conditioned sharp inspirations than were the longer delay periods, apparently because of a waning in effectiveness of the buzz as it continued over a period of several seconds. Under "stronger" shock conditions, there was no clear gradient of the effectiveness for the several intervals, as measured by the same index. Such shock conditions led to excitement which apparently delayed the waning in effectiveness of the buzz. In eliciting conditioned leg flexions, which were infrequent under all conditions, variable delay periods were no more effective than fixed ones. Because of the infrequency of withdrawals which resulted in the complete avoidance of the shock, the law of effect is inapplicable to the leg withdrawal reported in this paper, but the early termination of the shock by leg withdrawal diminished its effectiveness in establishing conditioned breathing reactions. Breathing, tail, and leg reactions developed in the order named and suffered extinction in reverse order. The results indicate that the white rat, when restrained and shocked, can readily develop diffuse responses. More specific reactions, as leg withdrawals, are rarely acquired.—E. Heidsieder (Wellesley).

4491. Kiriara, H. [General intelligence test and its norm. 1. Standardization of intelligence tests for children, adolescents and adults. 2. Mental development of the Japanese.] *Rep. Inst. Sci. Labour, Kurasiki*, 1934, No. 25, 1-22.—The purpose of this study was to study intellectual development in childhood, adolescence and maturity, to determine the distribution of intelligence among the Japanese, and to offer psychotechnicians reliable data and standardized test method. 11,949 subjects of various occupations, schools, and ages, of whom 5859 were females, were examined with four kinds of test, viz., rote memory, recognition, completion and analogy, and Rybakow's figure. High reliability coefficients have been attained from these tests, and the distribution of intelligence was also ascertained, all particulars being shown in tables and figures. As to mental development, the males were usually superior to the females at all ages, but a few exceptions occurred before about twelve years of age; a marked difference was seen between school and working children, the latter being much inferior.—R. Kuroda (Keijo).

4492. McGeoch, G. O. Reminiscence in maze learning by kindergarten children. *J. genet. Psychol.*, 1937, 50, 171-186.—The purpose of this experiment was to discover whether reminiscence occurred in maze learning with kindergarten children. The Young slot maze A was used with 241 5-year-old children of average and superior intelligence. They were divided into a control group, who took five trials in succession, and experimental groups I and II, with whom an interval of 24 hours was inserted between the fourth and fifth trials and the second and third trials respectively. There is no consistent or reliable evidence of reminiscence in either experimental group.—E. Heidbreder (Wellesley).

4493. Miyoshi, M. [Complex-width and perseveration in memory.] *Jap. J. Psychol.*, 1937, 12, 13-32.—The author points out three important factors in memory; complex, perseveration, and association. In this paper, however, he reports his experimental work concerning the last two. Individual differences were found in the complex-width of both auditory and visual stimuli, as well as in the intensity of perseveration. English summary.—R. Kuroda (Keijo).

4494. Morito, G. [On crowing.] *Jap. J. Psychol.*, 1937, 12, 193-204.—Cocks deafened 35 days after hatching were able to begin to crow, though about 10 days later than normal ones; as to their notes, there was no perceptible difference between them. The hours of crowing were constant through the year and independent of the brightness of the environment. Being injected or fed with a masculine hormone, the cocks as a whole showed some symptoms of its effectiveness upon their crowing. As regards the relation between crowing and separation or cohabitation, crowing takes place more often in separation than in cohabitation, and much more in reparation. The rate of increase in frequency of crowing is much higher in hormone-treated animals. English summary.—R. Kuroda (Keijo).

4495. Pintner, R., & Maller, J. B. Month of birth and average intelligence among different ethnic groups. *J. genet. Psychol.*, 1937, 50, 91-107.—Slight but statistically significant differences in IQ indicate that children born in the warm months (June-November) are, on the average, brighter than those born in the cold months (December-May). This difference held for each of three ethnic groups: Italian, Jewish, and negro children. The same difference in favor of warm months was found in several aspects of infant vitality, as revealed in health statistics. It is suggested that the ethnic character of the population is an important factor in studies of seasonal variation and that many of the contradictory results of studies in that field may be due to differences in the ethnic composition of the populations studied.—E. Heidbreder (Wellesley).

4496. Ray, W. S. The relationship of retroactive inhibition, retrograde amnesia, and the loss of recent memory. *Psychol. Rev.*, 1937, 44, 339-345.—These three memory phenomena are similar in that

(1) they all involve loss of memory, (2) the material lost is that which was learned during the period immediately preceding the event which caused the loss, (3) each is accompanied by a "non-discernable" neural change such as is involved in learning, (4) each may be an inability to recall rather than retain, (5) each may involve an emotional tone which may be unpleasant, and (6) this tone may be acquired during the period of retention in each case.—A. G. Bills (Chicago).

4497. Schott, E. L. IQ changes in foster home children. *J. appl. Psychol.*, 1937, 21, 107-112.—"The gain after placement is not statistically significant; and the average change is about the same as variabilities reported from investigations unconcerned with environmental improvements affecting the retest."—R. S. Schults (Psychological Corporation).

4498. Scola, F. Zur Frage der Intelligenz und Intelligenzuntersuchung. (The question of intelligence and the study of intelligence.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 478-484.—The author wishes to distinguish between the measurement of intelligence (a quantitative test of the subject's total, general intelligence) and the study of intelligence (emphasizing its qualitative aspects). Newer intelligence tests attempt to combine both features and emphasize qualitative differences; at the same time theoretical psychologists attempt to reduce these to the minimum number of fundamental functions. There is a need for relatively unspecialized tests of intelligence which will indicate the qualitatively differentiated basis from which measurement can be made. The fact that such tests would be less general and mechanical is a further argument in their favor. The suggested change parallels the shift in emphasis from measurable performance to a qualitative evaluation of experiences which has occurred in theoretical psychology.—H. Beaumont (Kentucky).

4499. Simon, W., & Schönfeld, W. Vergleich der Intelligenzschätzung mit graphologischer und psychotechnischer Methode. (A comparison of estimates of intelligence on the basis of graphological and psychotechnical methods.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 700-701.—A correlation of .33 was found between a graphological estimate of intelligence and scores computed for a battery of 12 tests. In addition to an estimate of intelligence, the graphological analysis disclosed many characteristics of the subjects. These were compared with the answers obtained to a questionnaire (containing 74 items) during a personal interview. Graphologically determined traits were thus verified in 45% of the cases, 21% were doubtful, 25% could not be discovered by psychotechnical means, and 9% were wrong. The author concludes that the graphologist cannot supplant the psychotechnician, because he cannot distinguish analytical from associative thinking or discover special talents, but he can make a preliminary selection and discover abnormal conditions which are not self-evident and might be over-

looked by psychotechnicians.—*H. Beaumont* (Kentucky).

4500. Spielerein, I. N. *La pratique de mensuration de l'intelligence*. (The practice of intelligence testing.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 701-705.—In capitalistic countries the influence of social conditions on test results has been underestimated, because such underestimation enables the bourgeois population to "demonstrate" the intellectual inferiority of oppressed groups. Thus, giving a Binet test, translated into the language of an outlying Russian province, to European and native children, resulted in a distinct inferiority of the natives (29.1% correct answers compared with 48.5%). After modification of the test so that all items were equally familiar to both groups, the percentages of correct answers were 48.0 and 47.13 respectively. In Soviet Russia the improvement of material and cultural conditions of the laboring class has brought about a profound change in intellectual status in favor of the workers.—*H. Beaumont* (Kentucky).

4501. Stauffacher, J. C. *The effect of induced muscular tension upon various phases of the learning process*. *J. exp. Psychol.*, 1937, 21, 26-46.—In this study tension was induced by having subjects support weights while they were learning nonsense syllables. Poor learners were found to benefit from induced muscular tension in terms of increased efficiency in learning, whereas good learners did not. Among the poor learners, those who had no previous practice in the anticipation method of learning benefited more than the practiced poor performers. There was some indication that poor learners may be facilitated and good learners inhibited in both recall and relearning by the induction of tension during reinstatement. The results of the study tend to confirm Washburn's "motor theory of consciousness," which asserts that the motor processes are not only accompaniments of consciousness but that they play a direct causal role in consciousness.—*H. W. Karn* (Pittsburgh).

4502. Wenger, M. A. *A criticism of Pavlov's concept of internal inhibition*. *Psychol. Rev.*, 1937, 44, 297-313.—Pavlov used "internal inhibition" as an explanatory concept for the decrement in response in experimental extinction of conditioned responses, and negative, differential, delayed and trace conditioning. Disinhibition is attributed to its removal by distraction, and sleep to its irradiating effects. It is argued that at least one of the factors causing the so-called gradual irradiating cortical inhibition is the relaxation of muscular tonus which may result from factors extraneous to the conditioning process itself, but involved in the experimental set-up. Similarly, so-called "disinhibition" may result from experimentally induced hypertension, or reinstatement of tonus. But relaxation does not account for all the response decrement, for Wendt showed that experimental extinction and delayed, trace, and differential conditioned responses can develop without it. He interpreted it in terms

of competition, or the reciprocal innervation of competing systems. Wenger summarizes his position in the form of four principles and a postulate, as follows: "There are at least two forms of inhibition: (a) reduction of proprioceptive facilitation, and (b) a shift of dominance to a competing reaction." Certain deductions from the postulate are verifiable, as the effect of depressing and exciting drugs on experimental extinction, etc. Most of Pavlov's work on inhibition and conditioning must be repeated, with drowsiness eliminated.—*A. G. Bills* (Chicago).

4503. Williams, G., & O'Brien, C. *The effect of sodium phenobarbital on the learning behavior of white rats*. *J. comp. Psychol.*, 1937, 23, 457-474.—A total of 55 rats divided into a control and a drugged group, the groups being equated in age, sex, and litter, were trained on a 10-unit U-maze. Thirst was the drive utilized. The dose of sodium phenobarbital was 0.087 gram per kilogram of body weight. The animals relearned the maze after an interval of six weeks. In terms of time and error scores and for both learning and relearning the drugged animals were consistently inferior to the controls. This inferiority was greater for learning than for relearning. The effect of the drug is apparently something other than a decrease in physical activity. Bibliography.—*N. L. Munn* (Peabody).

[See also abstracts 4434, 4435, 4447, 4448, 4531, 4569, 4603, 4614, 4648, 4684, 4743, 4787, 4795, 4821, 4824, 4826, 4846, 4868, 4871, 4876, 4877.]

MOTOR AND GLANDULAR RESPONSES

(incl. Emotion, Sleep)

4504. Beebe-Center, J. B., & Stevens, S. S. *Cardiac acceleration in emotional situations*. *J. exp. Psychol.*, 1937, 21, 72-87.—This study presents an attempt to extend the knowledge of autonomic factors in emotion by studying the cardiac behavior of cats in emotional situations. Action potentials of the heart beat were amplified and recorded on ticker tape by means of an undulator. Stimuli consisted primarily of pistol shots and the presentation of dogs. A shot elicits an acceleration of heart beat, with a latency of .54 sec. on the average. The action time varies, according to the magnitude of the response, from .42 to 2.3 sec. The recovery time also depends upon the magnitude of the response, but shows an average duration of 4 sec. The extent of the rise in heart rate is about 30 beats per minute. Sudden presentation of a menacing dog produces a marked change in heart rate. For the first two presentations to two cats the average rise was 81% of the base rate. In this rise there is usually a sharp peak in heart rate within .35 to 1.25 sec. of stimulation. The temporal features of the startle response to shots and the rapidity of occurrence of the sharp peak in the response to dogs may be compared to the temporal features of cardiac response to direct stimulation of autonomic nerves.

The comparison suggests that the sudden response to shots and dogs must be due to the activity of the parasympathetic system.—H. W. Karn (Pittsburgh).

4505. Bena, E. **Physiological selection.** *C. R. 8 Conf. int. Psychotech., Prague, 1935, 579-606.*—Correlations between the largest possible number of organic functions should be known for the purposes of physiological selection. The two groups of organic functions which participate in every activity are: those of the cerebrospinal nervous system with the skeletal muscles, and those of the vegetative organs and nervous system. There are, then, three groups of correlations: between different activities of the cerebrospinal nervous system, between different activities of the vegetative system, and intercorrelations between the two. Cerebrospinal functions include those of the cortex (intellectual functions and those of the psychophysical apparatus) and those of the brain sub-cortex (instinctive and learned reactions). Our knowledge of correlations between various vegetative functions (circulation, digestion, etc.) is only qualitative. Something more is known of the intercorrelations between the two groups (electrophysiology, metabolism). These should be studied in the state of rest, during work, and in the transitional state from rest to work and vice versa. Numerous intercorrelations computed by the author are submitted.—H. Beaumont (Kentucky).

4506. Bergeret, P., Giordan, P., & Strumza, M. **Travail musculaire en altitude et inhalation d'oxygène.** (Muscular work at high altitude and intake of oxygen.) *Travail hum., 1937, 5, 129-149.*—More oxygen is needed at high altitudes when doing muscular work such as operating a machine gun or manipulating photographic apparatus. A bicycle ergometer and decompression chamber were used to check the effect of different altitudes, with special reference to the amount of artificially supplied oxygen necessary. Work of 5 kg. per sec. for a period of 2 min. at 8000 meters requires 400 liters of oxygen to be supplied per hour. Similar data are given for other altitudes and amounts of work.—H. E. Burt (Ohio State).

4507. Bergman, L., & Pike, F. H. **Reflexes, spinal, decerebrate, and normal.** (Film). Brooklyn: Authors, 2029 86th St., 1932. 250 ft., 16 mm. Prices on request.—This silent film shows (1) the methods of spinal transection and decerebration, and (2) the effects of these insults upon the behavior of the cat. Reflexes elicited and compared in the normal, decerebrate and spinal specimens include the plantar, tail-twitch, knee-jerk, crossed extensor, and walking movements. Reactions shown only in the decerebrate preparation are the wink reflex, muscular rigidity, Magnus-DeKleijn reaction, and double flexion response. An explanatory guide accompanies the film.—L. F. Beck (Oregon).

4508. Brainess, S. **The analysis of mitogenetic blood radiation in mental disorder as a basis for therapy.** *J. nerv. ment. Dis., 1937, 86, 24-36.*—

Proceeding from the assumption that the sensation of fatigue reflects some real physiological process, the author questioned whether the analysis of the mitogenetic blood radiation could be an adequate method for the study of fatigue phenomena of different origins. The investigation of blood radiation after various types of work showed its clearly marked depression and often its complete disappearance. With neurasthenics who complained of fatigue even in the morning when still in bed, it was found that their radiation was very weak in the morning and considerably higher during the later part of the day. The fact that a neurasthenic patient's disturbed sleep gives the inverted type of radiation, like extreme overfatigue, shows what a great significance sleep has for radiation. Rest does not seem to replace sleep, for the absence of sleep is not recompensed by rest.—C. R. Atwell (Boston Psychopathic Hospital).

4509. Brandt, H. **Die Abhängigkeit der Bewegungsgeschwindigkeit der Nonnenraupe (*Lymantria monacha* L.) von der Temperatur.** (The speed of movement in the gypsy-moth caterpillar as dependent upon the temperature.) *Z. vergl. Physiol., 1936, 23, 715-720.*—T. C. Schneirla (New York University).

4510. Brecher, G. A. **Optisch ausgelöste Augen- und Körperreflexe am Kaninchen.** (Visually released eye and bodily reflexes in the rabbit.) *Z. vergl. Physiol., 1936, 23, 374-390.*—Contrary to previous reports, the rabbit is capable of eye movements in response to visual stimuli, although not in response to movement against a stationary field, in which case other reactions (e.g. flight) supersede. When the entire visual field moves, as for the rabbit in a revolving drum with black-white striped lining, visually aroused movements, both of eyes and of head, are recorded. An optokinetic nystagmus with 10-60 movements per minute, accompanied by head nystagmus, was demonstrated in seeing rabbits, but not in blind rabbits. An after-nystagmus, directed equivalently to the rotational nystagmus, also appeared. Labyrinthine nystagmus (in a rabbit rotated at speed equal to that of the drum) and visual nystagmus (with drum alone rotating) were tested separately, and the visually-aroused nystagmus was found to be the weaker of the two effects.—T. C. Schneirla (New York University).

4511. Brockhoff, F. G., Schoedel, W., & Springorum, W. **Atemmittellage und Atmungsregulation.** (The rate and regulation of respiration.) *Pflüg. Arch. ges. Physiol., 1937, 238, H. 4.*—In agreement with animal experiments, the authors found also in man relationships between the rate and regulation of respiration, which demonstrate the "physical steering" of the respiratory mechanism. Sudden drops in the rate lead to transient increases of respiratory volume, which must be referred to changes in sensitivity of the respiratory center.—P. L. Krieger (Leipzig).

4512. Burian, H. **Die Wirkung des Naphthalins auf das Rückenmark des Frosches.** Ein Beitrag zur

Lehre von der Reflexfunktion des Froschrückenmarkes. (The effect of naphthalin on the frog's spinal cord. A contribution to the theory of reflex activity of the frog's spinal cord.) *Pflüg. Arch. ges. Physiol.*, 1937, 238, 651-664.—In doses of 0.1-0.3 gram per 100 grams body weight, naphthalin causes loss of reflex activity to mechanical stimulation and loss of postural reflexes. Chemical, thermal and electrical stimulation of the skin do not lose their efficacy in evoking reflex activity in the presence of naphthalin. The effect of strychnine is antagonized by naphthalin, from which it is concluded that both work on the same reflex pathways.—*M. A. Rubin* (Clark).

4513. **Byrne, J. G.** The effect of stimulation of the cortex cerebri upon the effector mechanisms which mediate movements of the iris and membrana tympani. *J. nerv. ment. Dis.*, 1937, 85, 528-540.—The mechanisms for these movements as effected by cortical stimulation are discussed.—*C. R. Atwell* (Boston Psychopathic Hospital).

4514. **Davidson, F. A.** "Migration" and "hom-ing" of Pacific salmon. *Science*, 1937, 86, 55-56.—Evidence is presented to show that marked sockeye and Alaskan salmon migrate out to sea far beyond the influence of the gradients produced by their parent streams, mature and then return to their parent streams to spawn.—*F. A. Mote, Jr.* (Brown).

4515. **Dosůžkov, T.** Les réflexes des muscles striés chez les individus adultes normaux. (Reflexes of the striated muscles in normal adults.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 607-610.—This experiment attempts to differentiate normal reflexes (occurring with absolute regularity) from those which may be absent in certain individuals and from those occurring only by exception in normal persons. A total of 500 subjects between the ages of 21 and 60 was tested for 85 different reflexes. Of this number, 56 were found to be normal, 29 abnormal (occurring only rarely). None of the 85 reflexes was present in all of the 500 subjects, but 36 were found in more than 50% of them and 20 more in almost 50%.—*H. Beaumont* (Kentucky).

4516. **Eisenberg, P.** A further study in expressive movement. *Character & Pers.*, 1937, 5, 296-301.—The study of Allport and Vernon was concerned with the intra-individual consistency of expressive movements. The present study is a check on those findings by the use of a homogeneous group of 24 men and 24 women. High repeat reliabilities (.765) indicate that single habits of gesture are stable characteristics. Higher reliabilities (.83) for acts involving both hands indicate intra-muscular consistency. Thus the original results are confirmed.—*M. O. Wilson* (Oklahoma).

4517. **Essen-Möller, E.** Den moderna tvillingforskningen. (Modern research on twins.) *Svenska Läkartidn.*, 1937, 34, 900-910.—Following a general discussion of the theoretical background for research on twins and the diagnosis of identity, the writer gives a summary of results up to the present concerning hereditary tendencies to pulmonary tuber-

culosis, diabetes, schizophrenia, criminality, feeble-mindedness, anatomical characteristics such as shape of heart, the cell system of the nose and ears, visual refraction, etc. Germany has arranged for large school colonies consisting of twins only, and even the manner of sleep is being investigated in specially arranged dormitories for twins. The article concludes with an outlined program for research on twins in Sweden, through the cooperation of all clinics and hospitals.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4518. **Foley, J. P.** Factors conditioning motor speed and tempo. *Psychol. Bull.*, 1937, 34, 351-397.—Speed of reaction is conditioned by specific environmental factors. Data on the operation of physiological factors, age or maturational factors, sex differences, "constitutional" type, and "racial" type are negative or inconsistent. In general inter-correlational and factor pattern analyses have supported a specificity interpretation rather than one based on a "general factor of speed." Vocational stimulation and institutionalized motor responses occurring at a particular rate of speed play a major role in conditioning the speed of motor response and sensory preference, as well as of motor tempo and rhythm.—*R. H. Brown* (Clark).

4519. **Franz, J.** Über die Fussöffnung von Hydra und die Geschichte der Kenntnis von ihr. (Concerning the dissection of the foot of hydra and the history of knowledge about it.) *Biol. Zbl.*, 1937, 57, 21-35.—There is included in this discussion of experimental study of hydra an annotated bibliography covering the period from 1702 to 1932.—*E. R. Hilgard* (Stanford).

4520. **Götz, B.** Beiträge zur Analyse des Verhaltens von Schmetterlingsraupen beim Aufsuchen des Futters und des Verpuppungsplatzes. (Contributions to the analysis of caterpillar behavior in the orientation toward food and the locality of pupation.) *Z. vergl. Physiol.*, 1936, 23, 429-503.—"Negative geotaxis" and "positive phototaxis" are essential to food-getting in *Vanessa* caterpillars, but weaken as pupation approaches. Vision governs distance orientation toward plants, but the food plant (a nettle) is differentiated only when nearby, probably on the basis of "olfaction." In responses to plants the nature of reflected light is effective, "form" is not. Under certain conditions, small black or white surfaces against any background were approached; entire plants, single leaves of any species, or green patches were approached. The effect of wave length as such was not tested. Bare food-plant stalks were approached, stalks of other species were avoided, with exceptions. A stalk containing leaves was more readily mounted. Mature *Vanessa* caterpillars always spun their cocoons upon surfaces of less than 45°. This was determined by presenting surfaces with terraced slopes of different inclinations. For this light is secondary in importance. Caterpillars usually settled in shady places, seldom in places where light came from below. They settled most readily upon

dry portions of stems.—T. C. Schneirla (New York University).

4521. Hoffman, R. W. Über den Einfluss von natürlichen und künstlichen Druck- und Berührungsreizen auf Haltung und Verhalten der Insekten. (Concerning the influence of natural and artificial pressure and tactual stimuli upon the posture and behavior of insects.) *Z. vergl. Physiol.*, 1936, 23, 504-542.—Flies and other insects variously mounted or held were presented with different tactual stimuli, in a study of the factors controlling posture and movement. Needle-mounted insects begin to fly when raised from the substratum, as a result of the cessation of tarsal contact, together with kinesthetic stimuli from the legs. Certain lepidopterans, when set down, regularly fall into tonic immobility as a result of tarsal contact. In this condition the insect's sensitivity is greatly reduced, and normal reflex changes in posture are not arousable by tactual stimuli. In the water-strider, suitable artificial contact and pressure stimulation releases a corresponding series of specific reflex-figures of the legs, related to given conditions of immobility. These circumstances were observed under natural conditions, in which position on the water film or on plants depended upon the pattern of tactual stimuli. The facts are related to the immobility of sleep, insect sleep being regarded as a form of reflex immobilization.—T. C. Schneirla (New York University).

4522. Isibasi, B. [On the effect of mental excitement upon the surface tension of urine.] *Igaku Kenkyu*, 1936, 10, 1639-1681.—In this study it is suggested that mental excitement will probably decrease the urinary surface tension. This was shown in prisoners, both before and after the presence in court, and in students sitting for an examination. English summary.—R. Kuroda (Keijo).

4523. Kafka, F. Über die funktionelle Beziehung der linken Hirnhemisphäre zur Leistungsfähigkeit des Menschen. (The functional relation of the left brain hemisphere to capacity in man.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 532-540.—Lower forms of animal life show no indication of dexterity; apes very rarely have hand preferences. The Neandertal man used his right hand more than his left, and today there is a considerable prevalence of right-handedness. Authorities differ on the relationship between left-handedness and mental aberrations. It is probable that right-handedness depends in large part on training. Pathological conditions (aphasia, apraxia, agnosia and various brain injuries) give important cues to a better understanding of the functional relationship between hemisphere and handedness.—H. Beaumont (Kentucky).

4524. Kreezer, G., & Glanville, A. D. A method for the quantitative analysis of human gait. *J. genet. Psychol.*, 1937, 50, 109-136.—Motion pictures are taken of the subject walking under certain standard conditions. The individual motion-picture

frames are projected one at a time, measurements are made of the angular positions at hip-, knee-, and ankle-joints, and graphs are constructed showing the changes taking place concurrently at these points as a function of time. On the basis of these graphs and of further measurements upon the individual frames, a large number of functionally important properties of gait are determined in quantitative terms. An examination of the subject's gait is made on the basis of motion pictures projected at the standard rate, and estimates are made of certain characteristics of gait, in order to give a qualitative description which may be compared with the quantitative data. The methods and sources of error are discussed, and illustrative graphs, tables, and diagrams are presented. The purpose of the method is to provide data for investigating the underlying neurological mechanisms of the motor activity studied.—E. Heidbreder (Wellesley).

4525. Krueger, W. C. F. The influence of amount limits and time limits upon the rate of work. *J. appl. Psychol.*, 1937, 21, 113-118.—Problems of two single digits were added under six working conditions. Rate of work was found to be higher for smaller work periods. Differences between rates of work were smaller when the relative proportions of task were smaller. Rate of work seems to be consistently higher when the task is in terms of amount than in terms of time.—R. S. Schultz (Psychological Corporation).

4526. Laugier, H., & Weinberg, D. Variations de la fréquence cardiaque au cours d'une épreuve de réactions de choix avec chocs émotifs. (Variations in cardiac frequency during a choice reaction test with emotional shocks.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 552-558.—The French state railways established in 1933 a labor laboratory which deals with any non-medical problem concerning the human factor in the labor situation. In the course of a choice reaction test, lasting 25 minutes, and consisting of red, green and white lights acting as normal stimuli and a siren as an emotional shock, mean cardiac frequencies were computed. The initial pulse rate was well above normal, indicating that the test situation as such had an emotional effect. A sudden increase after the first presentation of the normal stimuli was followed by a decrease, and is probably accounted for by a sudden mobilization of attention. A second acceleration occurred when the siren was first presented, causing an increase of 4.11 pulsations per minute, bringing the total up to 112.45. Subsequent presentation of the siren had a very slight effect, and negative adaptation became noticeable after the second presentation of the series. Subjects whose deviations were greatest were slowest to return to their normal pulse rate.—H. Beaumont (Kentucky).

4527. Longo, V. [Variations of the muscular tone by painful stimulus.] *Boll. Soc. med.-chir. Catania*, 1935, 3, 462-466.—The muscular tone was measured without stimulation in the normal subject, by the tonometers of Mangold and Spiegel, and

afterwards with a painful stimulus. The variations consisted of an increase of the tone during the stimulation and a post-emotive diminution. The same results were found in groups of patients (progressive paralysis, dorsal tabes, hypophrenia, paranoia, etc.). No variation was noted, even if the stimulation was prolonged, in the schizophrenics and parkinsonian postencephalitics.—*L. Canestrelli* (Rome).

4528. Loucks, R. B. Reflexology and the psychobiological approach. *Psychol. Rev.*, 1937, 44, 320-338.—The system of concepts formulated by Pavlov rests on the fundamental principle of irradiation of cortical excitations and inhibitions. This principle, which was derived by analogy with epileptoid disturbances resulting from strong electric shocks to the brain, is of doubtful value for interpreting normal psychobiological phenomena. Irradiation is assumed to be a gradually spreading disturbance requiring time; yet an analysis of six of Pavlov's conditioning experiments shows that inhibition appeared simultaneously in all points stimulated, which is incompatible with the hypothesis of irradiation. The experiment of Hull and Bass, purporting to confirm this hypothesis, confuses the concept of irradiation with that of gradient, since their composite curve represents one rather than successive time intervals. The author suggests that the term irradiation should no longer be applied to conditioning phenomena, because of its false connotations. The exclusively physiological viewpoint of Pavlov, with its oversimplification, should be replaced by a "psychobiological" viewpoint, which recognizes the complex features of behavior. Lepley's explanation of the forgetting curve, by identifying remote excitatory tendencies with trace conditioned reflexes, illustrates the abuse of this approach. We must recognize the limitations of existing objective techniques.—*A. G. Bills* (Chicago).

4529. Lux, W. Untersuchungen zur Vestibularprüfung mit dem elektrischen Drehstuhl nach Tönnies. (Investigations on the testing of the labyrinth with the electric rotating chair, following Tönnies.) Oldenburg i. O.: Drewes, 1936. Pp. 26.—*R. R. Willoughby* (Brown).

4530. McFarland, R. A., Knehr, C. A., & Berens, C. The effects of oxygen deprivation on eye movements in reading. *J. exp. Psychol.*, 1937, 21, 1-25.—"The results of this experiment indicate that the effects of oxygen deprivation on eye movements in reading are to increase the time and frequency of fixations and reduce the adequacy of the ocular adjustments, i.e., the normal amount of adjustment during each fixation is diminished. The decrease in the precision of the ocular movements was apparent in 12.5 percent O_2 , corresponding to 13,500 feet and quite marked in 10.5 percent O_2 (18,000 ft.). These effects may be ascribed to the diminished amount of oxygen being delivered to the nervous tissue in general, but it is difficult to attribute the reaction to cortical more than to sub-cortical areas of the brain."—*H. W. Karn* (Pittsburgh).

4531. Meltzer, H. Anger adjustments in relation to intelligence and achievement. *J. genet. Psychol.*, 1937, 50, 63-82.—By means of controlled diaries obtained from nearly a hundred college students, information on anger was obtained in relation to such topics as condition of individual before anger situations arise, style of adaptation to reality, level of assertiveness, manner of expression, management of impulses, and organization of personality after anger reactions. Data are presented in terms of differences between superior, mediocre, and inferior individuals as determined by the Otis higher examination for measuring intelligence and by six objective tests for measuring achievement.—*E. Heibredner* (Wellesley).

4532. Misbach, L. Depression of the patellar reflex by concomitant voluntary reaction in relation to variation in quadriceps tension. *J. comp. Psychol.*, 1937, 23, 393-419.—When there was no set for reaction and when only a simple reaction was involved, the flashing on of a light failed to influence the amplitude of the patellar reflex. Discriminative choice reactions, based upon differences in light intensity, led to partial depression of the amplitude of the knee jerk. Degree of depression varied in accordance with the temporal relation of knee-jerk elicitation and discriminative reaction. Depression was most marked when the knee jerk was elicited during the initial phase of the discriminative reaction. Diminution in quadriceps tension was not an essential concomitant of knee-jerk depression. Grouped data indicate, however, that there is a tendency for diminished quadriceps tension to coincide with the interval during which knee-jerk depression is produced. The author's analysis of his results in relation to neurophysiological theories leads him to conclude that they do not confirm or invalidate any theory of inhibition, but that they suggest an inadequacy of current theories. Bibliography.—*N. L. Munn* (Peabody).

4533. Molitor, A. Neue Beobachtungen und Versuche mit Grabwespen, IX. (New observations and experiments with sand-wasps, IX.) *Biol. Zbl.*, 1937, 57, 35-38.—Brief supplementation of previous reports, and some corrections. The bibliography contains 46 references outside the series.—*E. R. Hilgard* (Stanford).

4534. Molnár, I., & Schiller, P. Állando ingerek hatása a munkára. (Everyday nervousness as a drive to act.) *Lélektani Tanulmányok*, 1937, 1, 22-29.—By a simple question addressed by students to their acquaintances ("What are the situations which make you nervous and in what does your nervousness become manifest?") it was found that nervousness is an experienced tendency to act which becomes an inadequate psychic factor since it cannot result in overt action. Whether in a certain situation the inhibition of the tendency to act appears simultaneously with the tendency depends on the circumstances, will, etc. of the individual. English summary.—*F. A. Mole, Jr.* (Brown).

4535. Molnár, I., & Schiller, P. A mindennapos idegesség mint cselekvési törekvés. (The influence of constant stimuli on work.) *Lélektani Tanulmányok*, 1937, 1, 30-37.—"The fact was established that so-called bright stimuli, such as bright colors, high sounds, sour tastes and smells, improve the coordination, precision, speed and resistance to fatigue of motor and observational accomplishments, whereas dark stimuli have the contrary effect." English summary.—F. A. Mote, Jr. (Brown).

4536. Pieraccini, G. [On whether ambidexterity is useful in physical work. (On the organization of work.)] *Riv. Previd. Soc.*, 1935, No. 3, 55-87.—Educating the child to ambidexterity would tend to keep in adults the cerebral orientation of children, and it would lower the dexterity of the right hand without greatly raising that of the left hand.—L. Canestrelli (Rome).

4537. Podestà, H. H. Über die angebliche Veränderung der Chronaxie der Armbeuger bei willkürlicher Innervation ihrer Antagonisten. (On the apparent alteration of chronaxy of the biceps muscle by stimulation of its antagonist.) *Pflüg. Arch. ges. Physiol.*, 1937, 238, 629-632.—The chronaxy of the biceps muscle is unaltered whether reciprocal inhibition is present or not.—M. A. Rubin (Clark).

4538. Ponzo, M., & Banissoni, F. Valeur psychodiagnostique de quelques expériences sur les temps de réaction collectifs. (The psychodiagnostic value of some experiments on group reaction times.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 697-698.—The experiment consisted of instructing groups of five or six psychopathic 10-year-olds, arranged in circles, to pass an object (e.g. a ball) as rapidly as possible from hand to hand without stopping until the signal was given. Rivalry between groups was introduced and a prize given to those who had passed the object the greatest number of times. Many characteristics of the group and of individual participants could be observed. The method might well be applied to other simple operations and to adult groups of workers.—H. Beaumont (Kentucky).

4539. Rondelli, U. [On the measurement of ache.] *Boll. Mem. Soc. piemont. Chir.*, 1935, 5, 447-451.—Evaluation of ache may be had through the visceral-vegetative manifestations and somatic-muscular reactions, and even better by utilizing a standard ache, for instance in relation to a given hypodermic or intramuscular injection. The "experiment of injection" permits the estimation of ache in several individuals.—L. Canestrelli (Rome).

4540. Schaefer, H., & Göpfert, H. Aktionsstrom und optisches Verhalten des Froschmuskels in ihrer zeitlichen Beziehung zur Zuckung. (Action currents and optical behavior of frog muscle in their temporal relation to the twitch.) *Pflüg. Arch. ges. Physiol.*, 1937, 238, 684-708.—M. A. Rubin (Clark).

4541. Schmid, B. Über die Heimkehrfähigkeit von Waldmäusen (*Mus sylvaticus* L.). (Concerning the homing ability of field mice.) *Z. vergl. Physiol.*, 1936, 23, 592-604.—Two wild gray mice which had returned repeatedly after having been trapped and abandoned were experimentally released at distances up to 787 meters from their home, a corncrib. The mice successfully returned to their (habituated) cage after each release, somehow passing obstacles such as woods and a railroad track. Each mouse was released 16 times, at intervals of two days. As a rule, the return over approximately 700 meters required 7-16 hours, but for each animal certain returns required a number of days. For neither mouse did the time of return decrease with further trials; in fact longer times became more frequent. The author concludes that "none of the known sense organs of the mice can have guided their return," and attributes the returns to "an unknown factor," an "absolute orientation-sense."—T. C. Schneirla (New York University).

4542. Seward, G. H., & Seward, J. P. Internal and external determinants of drives. *Psychol. Rev.*, 1937, 44, 349-363.—The authors aim (1) to clarify the part played by internal and external stimuli in motivation, and (2) to stabilize current classifications of drives by relating them more closely to underlying physiological mechanisms. A drive is defined as "an activity of the total organism resulting from a persistent disequilibrium." Drives are enumerated in terms of the objects or activities biologically adequate to restore equilibrium, such as water, food, rest, mate, escape, submission, etc. A two-fold division of drives into external and internal is reflected in the physiological mechanisms involved. Thus vegetative and emergency drives differ in that the former are cyclic, the latter non-cyclic; the former involve disturbance of the normal autonomic balance in favor of the craniosacral division, while the latter involve the sympathetic; and the order of initial processes is from chemical to neural in the vegetative and the reverse in the emergency drives. Actually drives can be arranged along a continuum from the most internal type, as water and food, to the most external, as attack, escape, and exploration. Maturation and learning modify the drives, through conditioning vegetative drives to external stimuli. Further lines of research are suggested on the basis of this analysis.—A. G. Bills (Chicago).

4543. Spadavecchia, S. Contributo alla conoscenza della costituzione motoria. (Contributions to the knowledge of motor constitution.) *Rass. Studi psichiat.*, 1936, 25, 384.—The author employed the test methods created and improved by Oseretzky for the investigation of motor constitution and endowed development in healthy and unhealthy children. Among the Italian children many regional differences prevail. Girls surpass boys in respect to motor capacity in the earliest years. In psychically abnormal children no close connection between mental and motor development could be established.

It is proposed that definite investigation of the motor constitution of mental defectives and a classification of common motor insufficiencies be made.—*P. L. Krieger* (Leipzig).

4544. *Strehle, H.* Die unwillkürlichen menschlichen Ausdruckserscheinungen als Künder der Seele. (Involuntary human expressive movements as indicators of mental activity.) *Soldatentum*, 1937, 4, 119-124.—The study is concerned in general with various moments of psychic tension and their corresponding motor types of expression, such as the accent in German speech.—*P. L. Krieger* (Leipzig).

4545. *Sumner, F.* Changeable coloration. *Sci. Mon.*, N. Y., 1937, 45, 60-64.—A short discussion of the mechanism of changeable coloration, with special reference to fishes. Data showing the adaptive value of these color changes are presented.—*O. P. Lester* (Buffalo).

4546. *Tuge, H.* The development of behavior in avian embryos. *J. comp. Neurol.*, 1937, 66, 157-179.—The observations pertain to pigeon embryos. Spontaneous movements of myogenic origin appeared first at from 85 to 90 hours of incubation and those of neurogenic origin at 95 hours of incubation. The spontaneous movements involve first the trunk, next the hip region, and finally, at 125 hours, the tail, wings, and hind limbs. The first responses to tactile stimulation occurred at 123 hours of incubation and consisted of flexion of the head and neck and, sometimes, of the trunk. At about 133 hours there was participation of the tail and extremities with the trunk movements. Embryos at 145 hours of incubation began to show discrete local reflexes of the tail, wing, and hind limb without participation of the trunk in response to stimulation of these respective segments. Pecking actions of the beak, opening of the mouth, movements of the eyeballs, separating movements of the fingers and the toes, and movements of the anus were first seen in conjunction with gross bodily movements as a whole. Later local reflexes of these organs developed. The first zone responsive to external stimulation is the snout and upper neck; then come the shoulder, trunk, back, and hip in an antero-caudal progression; finally the appendages are included. The author supports the well-known conclusions of Coghill that partial behavior patterns develop out of the total behavior pattern and only gradually acquire various degrees of discreteness. He critically examines recent findings that disagree with this generalization.—*C. P. Stone* (Stanford).

4547. *Viteles, M. S.* The influence of training on motor test performance: a note on sex differences. *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 737-738.—A battery of tests was given to 46 boys and 47 girls between the ages of 15 and 18. Statistically significant sex differences were found only in the case of the spool packing test B and the Stenquist mechanical assembly test. The trend in inter-correlations between the tests was the same for boys and girls. Correlations between short and long spells

of work were relatively low, whereas the values of coefficients decreased as the short run was compared with successive half-hour periods on the long run. These trends were the same for boys and girls as well as for the group as a whole.—*H. Beaumont* (Kentucky).

4548. *Wilbushewich, M.* Psychotechnische Versuche über den Verbrauch an Kohlenstoff bei geistiger und körperlicher Arbeitsleistung derselben Versuchsperson. (Psychotechnical experiments on the quantity of carbon produced by the same subject when engaged in mental and physical work.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 572-575.—These experiments were undertaken to determine to what extent mental superiority could compensate for the physical inferiority of European Jews in comparison to native Arabs in Palestine. More than 1000 subjects were used and the following results obtained: (1) Work which is suitable to an individual's physical and mental constitution and to his interests requires less expenditure of energy and a shorter recovery period. (2) The feeling of achieving something useful enables the Jew to perform his work with little expenditure of energy. More sensitive individuals produced less carbon for mental work, more robust ones less for physical work. Basal production per hour ranged from 32.2 to 81.6 calories, that during mental work from 35.0 to 67.2, and that during physical labor from 41.8 to 190.6. Metabolism tests are recommended to supplement psychotechnical and psychoanalytical tests of mental and physical aptitudes.—*H. Beaumont* (Kentucky).

4549. *Yanagihara, N., Inasaka, K., & Takenaka, K.* [Effect of alcohols upon the pinna reflex to sound.] [*Oto-Rhino- & Laryngol. Clin.*,] 1936, 31, 947-954.—When a small amount of methyl or ethyl alcohol is injected into its abdomen, the guinea-pig increases the amplitude of the pinna reflex, while when given a large amount of them the latter either decreases or completely disappears. These changes of pinna reflex appear earlier and recover more easily with ethyl alcohol than with methyl. Injecting fusel oil, primary propyl alcohol, primary isobutylic alcohol, or fermentative amyl alcohol into the abdomen of the normal guinea-pig the authors found that its pinna reflex decreases. This effect of fusel oil upon the reflex is due chiefly to the fermentative amyl alcohol involved in it. Ranked by their strength of effect, the order is as follows: fermentative amyl alcohol, fusel oil, primary isobutylic alcohol, and primary propyl alcohol. When ethyl alcohol or primary propyl alcohol is injected into the abdomen of the normal guinea-pig along with a hypodermic injection of nitric strychnine, the amplitude of the pinna reflex always increases; when, however, fermentative amyl alcohol or fusel oil along with nitric strychnine is injected, the reflex never disappears. Even when the reflex does not develop by the injection of fermentative amyl alcohol or fusel oil, it can easily be increased

again by the administration of nitric strychnine. English summary.—R. Kuroda (Keijo).

[See also abstracts 4432, 4481, 4494, 4495, 4501, 4571, 4588, 4608, 4619, 4636, 4714, 4724, 4727, 4733, 4742, 4840, 4841, 4864, 4876, 4877.]

PSYCHOANALYSIS, DREAMS, HYPNOSIS

4550. Alexander, F. Die soziologische und die biologische Orientierung in der Psychoanalyse. (Social and biological orientation in psychoanalysis.) *Imago, Lps.*, 1937, 23, 142-156.—Translation of "The sociological and biological orientation of psychoanalysis," *Ment. Hyg., N. Y.*, 1936, 20, 232-248 (see X: 4045).—H. D. Spoerl (American International College).

4551. Baker, K. H. Report of a minor investigation of extra-sensory perception. *J. exp. Psychol.*, 1937, 21, 120-125.—This study involved an attempt to locate among the students at the University of Minnesota some who could duplicate or better the extra-sensory performance of Rhine's subjects at Duke University with Zener cards. None of the subjects tested displayed an extra-sensory ability.—H. W. Karn (Pittsburgh).

4552. Berner, E. Eine Einschlafstörung aus Todesangst. (Inability to sleep due to fear of death.) *Z. psychoanal. Pädag.*, 1937, 11, 44-53.—An 8-year-old girl, who was rather stable except for a tendency to introversion and a very limited imagination, experienced considerable difficulty in going to sleep after her father had become ill. This illness had caused her to think of his possible death, probably because this appeared to her as the worst punishment imaginable for her supposed sins (occasional lying). The difficulty was removed by discussing her problems with her and giving complete sex information. The analyst took over the role of the child's mother when the latter had to devote her attention to her sick husband, and represented the girl's father in her position as her school teacher.—H. Beaumont (Kentucky).

4553. Bernfeld, S. Zur Revision der Bioanalyse. (Toward a revision of bioanalysis.) *Imago, Lps.*, 1937, 23, 197-236.—The development of bioanalysis, the application of psychoanalytical theory to biology, requires drastic revision of Ferenczi's prospectus. Such dubious applications as Broughton's description of "anal-erotic" bees and Brun's attempt to demonstrate repression in ants must be rejected. The difficulty with Ferenczi's program as he conceived it lies in its romanticism. This trend, wherever found in present-day biology, must be discarded in favor of empiricism. Moreover, Ferenczi's proposed "physiognomy of organs" violates the principle of totality and disregards the significance of the person. But Alexander has shown how topology may be applied to the problems of bioanalysis, and a "topology" of organs as well as of processes is entirely possible.—H. D. Spoerl (American International College).

4554. Birnbaum, F. Individualpsychologie, Wissenschaft und Leben. (Individual psychology, science and life.) *Int. Z. indiv.-Psychol.*, 1937, 15,

66-72.—The relation of individual psychology to other schools of psychology is discussed. A brief account of the early life of the late Alfred Adler, creator of individual psychology, is included.—M. F. Martin (West Springfield, Mass.).

4555. Bonaparte, M. Paläobiologische und biopsychische Betrachtungen. (Paleobiological and biopsychical considerations.) *Imago, Lps.*, 1937, 23, 134-141.—There is no evidence of the castration complex, which depends upon a super-ego, in sub-human animals. More basic and more general is "dread of perforation." This can be traced biologically to unicellular organisms, whose life requires a bounding membrane. In the course of evolution a balance must be achieved between injurious and beneficial "perforation."—H. D. Spoerl (American International College).

4556. Brown, J. F. Psychoanalysis, topological psychology and experimental psychopathology. *Psychoanal. Quart.*, 1937, 6, 227-237.—Discussion is given of the various possibilities of cooperation between the psychoanalyst and the topological psychologist in the establishment of experimental procedures in psychopathology, together with an historical survey of the interrelationships between psychiatry and academic psychology indicative of immediate possibilities of cooperation. Attention is directed to the similarities and differences between psychoanalytical and topological methods, and reference is made to certain existing experimental procedures with implications significant to psychoanalysis.—M. H. Erickson (Eloise Hospital).

4557. Darlington, H. S. The confession of sins. *Psychoanal. Rev.*, 1937, 24, 150-164.—The confession of sin is an oral-erotic representation of some foreign experience to the body. It is closely analogous to vomiting, like which it is used to expiate sin in certain cases. The author cites a number of examples from savage tribes, particularly in East Africa, but also among the Eskimos and other groups. In those cases where a woman confesses her sin in order to bring about childbirth, the child itself may be considered her sin and various symbolic manifestations are carried out in order to purify the gestation.—L. S. Selling (Recorder's Court, Detroit).

4558. Deutsch, H. Don Quixote and Don Quixotism. *Psychoanal. Quart.*, 1937, 6, 215-222.—The author discusses the story of Don Quixote as a valid example of the tragedy of a narcissistically conditioned "world catastrophe." Don Quixote, by a process of withdrawing all cathexes necessary to bring the ego into contact with reality, transforms them into a single narcissistic force permitting a return to and a reliving of boyhood and childhood fantasies. Sancho is his bridge to reality, acting as a dissociated part of himself which could be instinct-accepting in character, thereby permitting a portrayal of the antitheses in man that together constitute a unity. Father and mother significances for Sancho are also given, and the author concludes with the statement that the effectiveness of the story lies in its portrayal for the idealist of the idealistic struggle against a world of windmills, of the de-

preciatory triumph of caricature for the realist, and of the pleasurable mastery of the infantile past for both.—*M. H. Erickson* (Eloise Hospital).

4559. **Duff, L. F. G.** A one-sided sketch of Jonathan Swift. *Psychoanal. Quart.*, 1937, 6, 238-259.—A brief review is given of the significant events in the life of Jonathan Swift and of his more important writings. These are then subjected to an analytical discussion in the light of psychoanalytic theory. Emphasis is placed upon the pregenital fixations manifested in his peculiar type of fantasy, the anal character of his misogyny, his unconscious self-portraiture in *Gulliver's Travels*, the clarity with which he portrays the peculiar nature of the conflicts with his super-ego, and the peculiar forms of insight into himself shown in his writings.—*M. H. Erickson* (Eloise Hospital).

4560. **French, T. M.** Die Realitätsprüfung im Traum. (Reality testing in the dream.) *Imago, Lpz.*, 1937, 23, 157-170.—Translation of "Reality testing in dreams," *Psychoanal. Quart.*, 1937, 6, 62-77 (see XI: 3229).—*H. D. Spoerl* (American International College).

4561. **Greenschpoon, R. R.** A famous case of compulsion neurosis. *Psychoanal. Rev.*, 1937, 24, 165-178.—This is a case analysis carried out in Stekel's clinic by the author. The patient's case originally was studied by Adler, who had at hand only a copy of a life history of the woman and never saw her himself. While the author draws no conclusion, he points out that although the statements made by Adler were correct as far as they went, there are a great many more things which the present author brings out in his analysis. The woman tried to believe that she was a virgin, but was practicing as a prostitute without full sex cooperation. It was necessary to bring back to her the fact that she had been violated in early childhood. The husband (with whom she had no relations) was a substitute for her father, corresponding to Adler's idea that she was attached to her father because he was a weak individual. At the completion of the analysis the woman's positive symptoms, which were found to be tied up with the violation in childhood, disappeared completely.—*L. S. Selling* (Recorder's Court, Detroit).

4562. **Grotjahn, M.** Kinderanalyse und Erziehung. (Child analysis and education.) *Z. psychoanal. Pädag.*, 1937, 11, 20-28.—The internal and external problems of children are quite different from those of adults. Hence analytic techniques used must be different and based on psychoanalytic theory and knowledge. The child analyst must not merely analyze the individual child, but it is also his function to analyze and adjust the entire school environment (including the teachers) and the relationship in which each child stands to that environment.—*H. Beaumont* (Kentucky).

4563. **Hermann, I.** Zur Frage der Libidokriterien. (On the question of criteria for libido.) *Imago, Lpz.*, 1937, 23, 236-239.—Sterba's contention that sexual pleasure subjectively experienced is an adequate

criterion for libido (see X: 5813) does not dispose of Bernfeld's pluralistic conception (see IX: 5671). It fails to deal with cases in which the subjective experience is lacking, and overlooks qualitative differences that Bernfeld would investigate topologically. The controversy requires better proofs than have been brought forward; Sterba's view of the libido seems to make the concept itself unnecessary.—*H. D. Spoerl* (American International College).

4564. **Homburger, E.** Configurations in play-clinical notes. *Psychoanal. Quart.*, 1937, 6, 139-214.—A study has been made of play activity in children as a form of associative material disclosing the significance of spatial configurations in the expression of dynamic relationships of shapes, sizes and distances. Specific accounts, with drawings, of play with toys are given and discussed in relation to the child's clinical problems dynamically expressed by the course and events of the play activity. There follows an account of an experimental procedure with a group of college people asked to use toys to construct dramatic scenes. Analyses of these disclosed, as in the case of the children, products of traumatic tension rather than dramatic products, possibly by virtue of the play material evoking a spirit of infantile conflict. Emphasis is placed upon the possibility of utilizing effectively, in the sphere of childhood, play hieroglyphs for an understanding of prelinguistic and alinguistic strata of the human mind.—*M. H. Erickson* (Eloise Hospital).

4565. **Jones, E.** Objektbeziehung aus Schuldgefühl. Eine Studie über Charaktertypen. (Object-relations proceeding from the feeling of guilt. A study of character types.) *Imago, Lpz.*, 1937, 23, 129-133.—The dominance in personality of ethical attitudes which develop from previous love relationships often leads to typical differences. In this ethical functioning of the super-ego the motives usually have a sadistic quality. This is shown in the stubborn imposition of scruples and standards. The types may be called provisionally "moral" and "ethical," depending on the relative participation of super-ego or id activation. The first type is characterized by self-judgment (of the sadistic regression), and is "hysterical"; the second by acting in terms of duty; this is "compulsive." The types are based partly upon constitutional factors and partly upon the nature of energy economy having a bearing on sadistic opportunities.—*H. D. Spoerl* (American International College).

4566. **Kubie, L. S.** Resolution of a traffic phobia in conversations between a father and son. *Psychoanal. Quart.*, 1937, 6, 223-226.—An account is given of the resolution of a traffic phobia in a 6-year-old boy by conversations conducted between him and his father. Accompanying the fear of traffic were anxiety concerning his penis and certain jealousies directed toward the father-mother relationships. Therapy was effected by simple conversations in which the child was permitted to raise questions and issues directly and to receive answers governed solely by realities comprehensible to him.—*M. H. Erickson* (Eloise Hospital).

4567. Mullin, F. J., Kleitman, N., & Cooperman, N. R. Studies on the physiology of sleep changes in irritability to auditory stimuli during sleep. *J. exp. Psychol.*, 1937, 21, 88-96.—This study consists of two parts: the determination of the changes in irritability to auditory stimuli which occur in a dog when it goes to sleep, and the determination of the intensity of auditory stimuli necessary to awaken a human sleeper at various times during the night in relationship to motility. When a dog falls asleep, the threshold for auditory stimuli rises in a characteristic way and shows an S-shaped curve which reaches its maximum about half an hour after the onset of sleep. A similar curve of irritability changes in the human sleeper is obtained when the intensity of the auditory stimulus necessary to awaken the sleeper is plotted against the time after the last movement. Changes in irritability during sleep in the human subject are directly related to the time that has elapsed since the last movement, rather than to the time of night.—H. W. Karn (Pittsburgh).

4568. Nachmansohn, M. *Erziehung und Psychoanalyse.* (Education and psychoanalysis.) *Z. Kinderpsychiat.*, 1937, 4, 20-24.—The second of two installments of remarks about Hans Zulliger's book *Schwierige Schüler*.—D. Shakow (Worcester State Hospital).

4569. Newman, I. The physiology of symbolization. *Psychoanal. Rev.*, 1937, 24, 131-138.—The author attempts to correlate the stimulus-response type of psychology with psychoanalysis. The basis for this interrelationship lies in the synapses, and there is no such thing as a simple stimulus-response; there must be a number of responses acting together at one time which produce the same results, so that if one is dropped out the others remain, as in conditioning. By using the inhibition theory it is shown that dreams bring out certain confluences of stimuli or responses, and on this basis a complex may manifest itself in symbolic form. This is worked out through a chain of reasoning about the pre-sensorium and the relationship reactions, which are present when only a part of the consciousness is stimulated, as in a dream.—L. S. Selling (Recorder's Court, Detroit).

4570. Spitz, R. *Wiederholung, Rhythmus, Langeweile.* (Repetition, rhythm, and boredom.) *Imago, Lpz.*, 1937, 23, 171-196.—In the pre-Oedipal period repetition guarantees continuance of pleasure by shutting out the unfamiliar, which is the chief source of danger. Economy of energy with respect to pleasure is also a factor in infantile repetition. Among adults repetition results merely in boredom, the favored kind of repetition which avoids this outcome being found in formal rhythms. The arts all exemplify this expression. In situations of a neurotic character repetition may again come to the rescue, and it is often induced by such means as drugs and rituals. The boring effect of repetition, which is sometimes sought, consists in detracting from the super-ego.—H. D. Spoerl (American International College).

4571. Warren, N., & Clark, B. Blocking in mental and motor tasks during a 65-hour vigil. *J. exp. Psychol.*, 1937, 21, 97-105.—The term "block" refers to those periods experienced by workers when they seem unable to make a response and cannot continue, even by effort, until a short time has elapsed. In this study blocking in mental work (addition, subtraction and color naming) was greatly increased after a period of prolonged sleeplessness, the most noticeable increase being observed after 40 hours for all subjects. Final test trials indicated a decrease in blocking for two of the three subjects who completed the vigil. Where this final spurt occurs it is evident that measurement at the beginning and at the end of a period of sleeplessness does not give a true picture of the changes produced by the vigil. Since sleeplessness was not continued to the point of exhaustion, the decrement in mental work is explained on the basis of failure to achieve motivation sufficient to overcome the subjectively increased thresholds of attention and effort. In contrast with the mental work, there was no increase in the number of blocks during tapping, and the blocks were fewer throughout. This is possibly to be explained as due to the fact that the subject was not motivated to work beyond a congenial pace.—H. W. Karn (Pittsburgh).

4572. Wittels, F. The mystery of masochism. *Psychoanal. Rev.*, 1937, 24, 139-149.—When one punishes himself he does not really think that he is punishing the same person; in other words, there is a sort of a dissociated personality. He may show such signs of emotional disinterestedness even to the point of a seemingly schizophrenic reaction, and he may visualize himself as above the plane of pure mundane experience. There are a number of psychological phenomena derived from observation which support this idea of flight from reality in the form of a fugue, as do cases of somnambulism like Janet's "Leonie," Morton Prince's "Beauchamp," and others. In suicide the person is in many cases not really killing himself, but is killing another person who is a part of himself. The ideas of grandeur in the paranoiac, too, fit into this picture, for there is an omnipotent feeling in all of us in a second personality. This is particularly exhibited in the statement that God has created man in His own image. With this type of example is that of the actor in which the individual takes a part entirely foreign to his own personality. A number of additional points of view are brought out, such as Jung's classification of "persona" and "anima."—L. S. Selling (Recorder's Court, Detroit).

[See also abstracts 4429, 4610, 4611, 4629, 4632, 4654, 4665, 4693, 4752, 4833, 4870.]

FUNCTIONAL DISORDERS

4573. [Anon.] Sterilization in hereditary mental deficiency. *Brit. med. J.*, 1937, May 1, 946-948.—R. R. Willoughby (Brown).

4574. Barbour, E. H. Adjustments during four years of patients handicapped by poliomyelitis. *New Engl. J. Med.*, 1935, 213, 563.—This study was made with the purpose of determining the physical improvement and the emotional adjustment, during a period of four years, of 60 children who were victims of infantile paralysis. In 1930 the degree of paralysis of these children was described in social terminology. Briefly, the patients were classified under the following heads: educationally handicapped so that the patient's educational progress was definitely impeded; occupationally crippled, the paralysis prohibiting the patient from certain occupations in later life, and socially handicapped, with disfiguring paralysis which might be a source of social embarrassment. In 1930 over half of all the children were in the socially handicapped group; approximately one fourth were in the most severely crippled, educationally impeded group, and a little less than one fifth were described as occupationally handicapped. In the 1934 redistribution the paralysis of half of the children in the total group had disappeared, and in half of the children who were still crippled only the mildest degree of paralysis remained. In slightly more than one child in five, the paralysis was an occupational handicap, and only one in fifty was severely limited in motion. In the occupationally handicapped group the least change was shown, and the marked decrease in the number of the socially handicapped children seems to indicate that such a child has an excellent chance of being normal at the end of four years of treatment. The scholastic retardation was an interesting social factor in this study. 25 of 40 children were not educationally retarded at the end of four years; 9 were retarded one year; 4 were retarded two years, and 2 were retarded three years. 6 of the 20 children who are still paralyzed are emotionally maladjusted to their handicap.—(Courtesy *Child Developm. Abstr.*)

4575. Barry, H., & Bousfield, W. A. Incidence of orphanhood among fifteen hundred psychotic patients. *J. genet. Psychol.*, 1937, 50, 198-201.—Family backgrounds were studied for 1500 psychotic patients. Of those born since 1910, 27.6% had lost one or both parents by the age of 12. Comparable figures for normal controls as presented by different investigators are definitely below 20%. The evidence suggests that the older patients have a smaller incidence of bereavements than those who develop a psychosis before the age of 25. The results are presented as tentative until confirmed with a larger group.—E. Heidbreder (Wellesley).

4576. Baumann, C., & Vedder, R. Zur Frage der infantilen Schizophrenie. (On the question of childhood schizophrenia.) *Z. Neurol.*, 1936, 156.—The authors are concerned with the differential diagnosis between dementia infantilis and dementia praecocissima, and with whether two different diseases are represented by these names. After discussing the symptomatology, they conclude that the two conditions are identical.—D. Shakow (Worcester State Hospital).

4577. Billström, J. Något om morbiditetsrisken för de sinnessjukas anhöriga vid tidig utskrivning. (Concerning the morbidity risk in families of mental patients discharged early.) *Soc.-med. Tidskr.*, 1937, 14, 54-56.—Several examples illustrate the tremendous strain and possibility of psychoses within the immediate family group called upon to take charge of a mental patient for years to come.—M. L. Reymert (Mooseheart Laboratory for Child Research).

4578. Bleuler, M. Erbllichkeit: Erbprognose, Durchschnittsbevölkerung, Schizophrenie, manisch-depressives Irresein, Epilepsie 1933-1936. (Heredity: inheritance prognosis, average of populations, schizophrenia, manic-depressive psychoses, epilepsy; 1933-1936.) *Fortsch. Neurol. Psychiat.*, 1937, 9, 250-264.—This article is an inclusive study of important investigations having to do with heredity. The first section is concerned with population studies devoted to frequency of various neurologic findings, psychoses, and mental deficiency in various regions of Europe. Several studies of inbreeding give support to the theory of the recessive character of such defects. The second section is concerned with studies of schizophrenia, manic-depressive psychosis and epilepsy in relation to heredity, but from the point of view of smaller groups rather than of population studies. There is a bibliography.—D. S. Oberlin (Delaware State Hospital).

4579. Braude, M. The principles and practice of clinical psychiatry. Philadelphia: Blakiston, 1937. Pp. x + 382. \$4.00.—This book is proposed as a simplified presentation of psychiatry. After an introduction which explicitly presents and defines much of the essential terminology of psychiatry, the major psychoses are described (sec. A). A single chapter is devoted to the psychoneuroses. There is also a miscellaneous section in which malingering, mental deficiency, and psychoanalysis are discussed.—J. McV. Hunt (Brown).

4580. Bringel, R. Neurosvardens behov. (The need for care of neurosis.) *Soc.-med. Tidskr.*, 1937, 14, 66-68.—An answer to criticisms concerning the proposed Swedish "treatment institute for neurotics."—M. L. Reymert (Mooseheart Laboratory for Child Research).

4581. Brown, H. C. A mind mislaid. New York: Dutton, 1937. Pp. 219. \$2.00.—An account of three years spent by the author as a patient in a psychiatric hospital.—D. Shakow (Worcester State Hospital).

4582. Bullinger, I. M. Die Kinder von Hilfschülern je nach der Erbstruktur ihrer Sippen. (The children of special-school pupils, with special reference to the heredity structure of their stocks.) Würzburg: Mayr, 1937. Pp. 18.—R. R. Willoughby (Brown).

4583. Butler, F. O. Psychosis in the mentally defective. *Calif. west. Med.*, 1937, 46, 84-89.—R. R. Willoughby (Brown).

4584. Christoffel, H. Zur Kinderpsychiatrie vor 50 Jahren. (The child psychiatry of 50 years ago.) *Z. Kinderpsychiat.*, 1937, 4, 11-19.—The first of two installments of an article on the child psychiatry of 50 years ago as represented mainly in Ebbinghaus' work *Psychischen Störungen des Kindesalters*, published in 1887.—D. Shakow (Worcester State Hospital).

4585. Codeceira, A. Relatorio da assistencia a psicopatas de Pernambuco, no periodo de 1935. (The psychopathic service of Pernambuco for the period of 1935.) *Arch. Assist. Psicopat. Pernambuco*, 1936, 6, 38-40.—R. M. Bellows (U. S. Employment Service).

4586. Eldh, S. Neuroserna ur sjukförsäkrings-synpunkt. (The neuroses from the point of view of sickness insurance.) *Soc.-med. Tidskr.*, 1937, 14, 87-93.—The writer gives a general survey of the various nervous diseases and discusses the classification of them, especially in regard to sickness insurance. It is mentioned that the various forms of all nervous diseases cost the city of Stockholm five million kronen yearly in sickness insurance payments.—M. L. Reymert (Mooseheart Laboratory for Child Research).

4587. Franks, R. M. Environment and the neuroses. *Canad. med. Ass. J.*, 1937, 36, 281-285.—R. R. Willoughby (Brown).

4588. Glanville, A. D., & Kreezer, G. Deficiencies in amplitude of joint movement associated with mental deficiency. *Child Develpm.*, 1937, 8, 129-138.—Maximum amplitude of voluntary and passive joint movement, as measured at 24 body joints by means of a plumb-line goniometer, was investigated in 20 adult male subjects, 10 mentally normal and 10 mentally deficient, with a mental age between nine and ten years. "The mentally deficient group fell beneath the mentally normal group in maximum amplitude of movement in about ninety percent of the joint movements examined. In about one-third of the movements, the differences found between mentally deficient and mentally normal groups were statistically significant."—F. D. McTeer (Wayne University).

4589. Goodnow, M. Two visions of psychiatry in Greater Asia. *Trained Nurse*, 1937, 98, 244-245.—R. R. Willoughby (Brown).

4590. Hackfield, A. W. Can a reorientation through mass therapy correct the fallacious concept of the incurability of mental disease? *J. nerv. ment. Dis.*, 1937, 86, 39-51.—The dissemination of the facts regarding the true status and cause of neurotic and psychopathic disharmonies among a sensible but misguided public was attempted through the group approach. The results obtained prove the practicability of this method.—C. R. Atwell (Boston Psychopathic Hospital).

4591. Harms, E. The social background of occupational neuroses. *J. nerv. ment. Dis.*, 1937, 85, 689-695.—"The fact that a gainful occupation as a vocational activity for the whole of life does not

coincide with the remainder of our social and other needs in life, calls forth severe inner oppositions, resistances, dissatisfactions, and alteration and depression motives, from which all possible pathogenics may arise." The formerly general point of view in education that one prepared one's inner self to be ready "to do simply anything and everything" means nothing but a certain maturity of personality, which when reached not only could furnish an inner resistance against all changes in the modern civilized struggle for vocations, but would also very easily permit a feeling of understanding and theoretical mastery in most of the practical spheres of life and of vocation.—C. R. Atwell (Boston Psychopathic Hospital).

4592. Harms, E. Emigrant-immigrant neuroses. *Psychol. Digest*, 1937, 1, 17-23.—This is a discussion of the reasons immigrants give for leaving their native land, the neuroses they had before and after leaving, the welcome given in the new land, assimilation problems, etc. Scandinavians in the home land and in the United States furnish the chief material.—F. A. Mole, Jr. (Brown).

4593. Harms, E. Handicraft and recreation. *Recreation*, 1937, 31, 243-244.—A brief discussion of the psychology of recreation, particularly the analysis of handicraft and its therapeutic values.—E. D. Hunt (Brown).

4594. Haug, K. Die Störungen des Persönlichkeitsbewusstseins. (Disturbances of personal consciousness.) *Forsch. Fortschr. dtsch. Wiss.*, 1937, 13, 8.—Depersonalization is only a syndrome. It is of two kinds: the defect type of organic brain disease and the functional reversible (feelings of strangeness) in epilepsy, intoxication, fatigue, falling asleep, awakening, mood swings, normal aging, and the beginning of psychoses. It is caused by disturbances of the "central psychic function," the sensory or the expressive processes, or even the environment; hence the auto-, allo-, and somato-psychic forms. Personality traits are also important—introspection, introversion, lively fantasy, visual mindedness, high intelligence, and intellectual and emotional differentiation. The vital but not the intellectual relations of psychic acts are disturbed. It is a disturbance of "vital fantasy."—J. Deussen (Freiburg).

4595. Hedenberg, S. Fall av schizofreni i olika åldrar. (Cases of schizophrenia at different ages.) *Svenska Läkartidn.*, 1937, 34, 790-796.—Four case histories are discussed in detail from the point of view of the influence of the age of onset of schizophrenia. It is suggested that there are different symptoms and personality disintegration patterns, according to whether the disease sets in during adolescence or during later life, for instance around 30 years of age.—M. L. Reymert (Mooseheart Laboratory for Child Research).

4596. Ingvar, S. Om de nervöst sjuka. (Concerning the nervously ill.) *Svenska Läkartidn.*, 1937, 34, 729-732.—Although the average physician encounters 50-80% of neuroses in his daily practice,

he has only a slight training in this field. The many viewpoints about neurosis make it a favorite field for quacks. The plea is made that every public general hospital in Sweden should have a section for nervous diseases under a competent leader.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4597. **Ishikawa, H.** [A product of schizophrenic thought.] *Psychiat. Neurol. japon.*, 1936, 40, 800.—The mental condition of schizophrenic patients will be expressed clearly in such things as pictures, writings or utensils which they produce. An interesting case was that of a man aged 59, suffering from this disease for ten years, who recently built a queer house of his own at great cost. English summary.—*R. Kuroda* (Keijo).

4598. **Kalmus, E.** *Arbeitsmöglichkeiten psychisch Abwegiger.* (Vocational possibilities for mental deviates.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 540-552.—A survey of special training institutions and classes organized in different European countries for the purpose of preparing mentally deficient and psychopathic children for a vocation, as far as this is possible. Creating employment for these groups is not a humanitarian but rather a social-hygiene problem which serves to direct general attention to the existence of these conditions and which supplements eugenic measures by making parents feel more responsible for their offspring.—*H. Beaumont* (Kentucky).

4599. **Kattolinsky, —.** *Der Tierstecher in Schleswig-Holstein.* (The animal-stabber of Schleswig-Holstein.) *Krim. Mh.*, 1937, 11, 124-128.—A 42-year-old laborer killed 25 and injured 49 animals (horses, cows, goats, cats, hens) between 1934 and 1936. The animals were sexually mistreated, stabbed in the chest or abdomen, eviscerated, their genitalia and ears cut off, and eyes gouged out. The criminal had previously been punished for theft, arson and violation of corpses. Kattolinsky refers to a number of similar cases. Although the obsessive, sadistic sexual perversion in such acts is obvious, it is often unrecognized and the criminal is punished only for cruelty to animals or destruction of property.—*M. E. Morse* (Baltimore).

4600. **Koga, Y.** [Cause and remedy of so-called sexual nervous dyspepsia.] *Shinkeishitsu*, 1937, 8, 15ff.—The author considers sexual nervous dyspepsia as a kind of compulsive idea. As for its cause, he puts stress on nervous predisposition; as to its motives, he points out slight astonishment, frequent attention to the sexual parts, misunderstanding of natural uneasiness as a morbid idea, and a despondency caused by tenacity and complication of unpleasantness as a result of an endeavor to overcome it. It is, therefore, a mistake to make an effort to cure this disease by administering medical substances such as hormones, etc. Its only proper remedy is, as in ordinary psychoses, to build up a character; he reports this fact with some examples. English summary.—*R. Kuroda* (Keijo).

4601. **Kranefeldt, W. M.** *Über zwei Arten archetypischer Zuordnung.* (Two kinds of arche-

typal association.) *Zbl. Psychother.*, 1936, 9, 322-334.—Kranefeldt contrasts the bilateral type of archetypal grouping—the divine parents and son, in which the latter's rise is accompanied by the father's decline; and the unilateral father-son association, in which the mother is formless or in the unconscious (anima). The father becomes increasingly powerful and threatening, and sacrifices the son. Chaos reigns until the son reinstates him. Wherever the father-son relationship is asserted, the mother is excluded and the emphasis falls on the father. This relationship, with a strong religious pathos connected with the son, is the theme of the Old Testament (also of Freudianism) and has been carried over into Christian theology. The bilateral grouping is the normal, the unilateral, the neurotic. Kranefeldt reinterprets the Oedipus myth, bringing out its bilateral elements and transforming it from the neurotic to the heroic. Only the anima psychology can unify the neurotic soul. The basis of German psychotherapy is the inner growth which begins with the realization of the anima.—*M. E. Morse* (Baltimore).

4602. **Lahy, J. M.** *La psychotechnique et la psychiatrie.* (Psychotechnics and psychiatry.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 640-653.—Psychotechnics ranks with biopsychiatry, physiology and biological chemistry as a supporting science of psychiatry. Its specific function is to measure mental and psychomotor functions. Several examples of such aids to psychiatry are given, including mental tests given to normal and paralytic individuals belonging to different social groups, memory and reaction-time tests, etc. Conclusions are: (1) even when gravely diseased, the human brain preserves the mark which culture has made on it (confirming the social nature of culture); (2) mental functions develop under the influence of culture; (3) intellectual differences due to differing levels of culture occur only in such mental functions as are exercised more by one cultural group than by another, not in general functions (visual memory, reaction times, etc.).—*H. Beaumont* (Kentucky).

4603. **Lang, H. B., Polatin, P., & Hotchkiss, S.** *Spontaneous eidetic imagery in a case of chronic epidemic encephalitis.* *J. nerv. ment. Dis.*, 1937, 85, 548-555.—*C. R. Atwell* (Boston Psychopathic Hospital).

4604. **Lion, E. G.** *Mechanism of narcolepsy.* *J. nerv. ment. Dis.*, 1937, 85, 424-437.—The physiology of the neuro-endocrine system of 12 narcoleptics was compared with that of 12 normals. The investigation embodied studies of the endocrines and of the autonomic nervous system, including history, examination, reflexes, laboratory procedures, adrenalin blood pressure curve, and orthostatic test of Danielopolu and Carniol. 83% of the narcoleptics were found to be vagotonic, the others isoneurotonic. 50% showed a vasomotor instability. 33% had endocrine disturbances. A pyknic body build was found in 58%. No pure types of sympathicotonic or vagotonic people were found. The

theory is advanced that it may be that emotional or other affective disturbances may upset the autonomic nervous system, producing a marked increase in vagotonic activities which precipitates a sleep or cataplectic attack. Bibliography.—C. R. Atwell (Boston Psychopathic Hospital).

4605. Mason, E. C. *Why we do it*. St. Louis: C. V. Mosby, 1937. Pp. 177. \$1.50.—A serious attempt to answer the questions of why broken homes, why juvenile delinquency, why the neurotic, and why insanity, written for parents and teachers.—E. D. Hunt (Brown).

4606. Nakagawa, K. [An experimental study of the etiology of hysteria.] *Psychiat. Neurol. japon.*, 1936, 40, 826-857.—The agitation of autonomic nerves in hysterical patients was tested by adrenalin injection. These subjects had special constitutions with both unstable autonomic nerve centers and supersensitive end organs; when their vegetative nervous systems were excited by stimulation of fixed ideas under certain circumstances, a strong organic sense was found to be awakened and hysterical symptoms were evoked. The author concludes that hysteria is a disease caused by an abnormal conception dominating a peculiar bodily constitution. English summary.—R. Kuroda (Keijo).

4607. Norrbin, B. *Sinnesjukdom och sinnessjukvård*. (Mental disease and care of mental patients.) *Soc.-med. Tidskr.*, 1937, 14, 21-33; 77-80.—A general discussion of the most prevalent mental diseases in Sweden. Experiences with the new law of voluntary commitment are also given. In one institution 17% of patients were apparently committed in 1936 upon personal request (mainly manic-depressive and schizophrenic), but in reality only one patient of these 40 actually applied without help for such commitment. The newly proposed sterilization law is also discussed.—M. L. Reymert (Mooseheart Laboratory for Child Research).

4608. Pritchard, M. C. *The mechanical ability of subnormal boys*. *Teach. Coll. Contrib. Educ.*, 1937, No. 699. Pp. x + 73.—79 subnormal boys, 12 to 18 years old, mental ages 8 to 14, were given mechanical ability tests, an intelligence test, personality inventory, character sketches, behavior rating schedules, and an interest blank. Correlations generally less than .30 were found between mental ability and the various measures of mechanical aptitude. A uniform shop task completed by each boy was rated independently by two judges ($r = .98$) and the score used as a criterion. Mechanical ability tests were found to correlate (.53 to .61) more highly with this criterion than did any of the other measures. On the basis of the judgments of teachers, counselors, and the director, each boy was classified as a success, probable success, probable failure, or failure, in regard to mechanical work. The "success" group was higher on the mechanical ability tests and the "failure" group lower than any of the other groups. The relationship between interest and

trade training ability was low. The bibliography lists 60 titles.—J. M. Stalnaker (Princeton).

4609. Raymond, C. S. *Provision for care and training of feeble-minded in Massachusetts*. *Hospitals*, 1937, 11, 32-39.—R. R. Willoughby (Brown).

4610. Ross, T. A. *The common neuroses, their treatment by psychotherapy*. An introduction to psychological treatment for students and practitioners. (2nd ed.) Baltimore: William Wood, 1937. Pp. xii + 236. \$4.00.—This second edition presents again the thesis that the majority of neurotic patients must be treated by general practitioners and a system of therapy founded upon the conceptions of Dejerine. Added in Chapter 13 is a description of the characteristics of patients best left to psychiatrists. The chapter on the application of the Freudian method is omitted for it is considered unnecessary and unwise for the general practitioner.—J. McV. Hunt (Brown).

4611. Schultz-Henke, H. *Über die Archetypen*. (Archetypes.) *Zbl. Psychother.*, 1936, 9, 335-343.—Schultz-Henke gives his concept of archetypes and their relationship to psychoanalysis. They are the types on which human categories rest, being at the same time actual individuals (incarnations) and creations of fantasy. They represent the unavoidable conflict between the ego and society. The child experiences them as real individuals, but as the problems which they present are insoluble, they are repressed. A tendency remains, however, consciously to experience the archetypes and relations to them, i.e. to try to solve the conflicts. The content of these attempts is always the struggle between self-development and the former archetypic person. Although archetypes form the background of all neurosis, the author deprecates the invocation of such an abstract concept as tending to a rigidity and magical quality which are incompatible with the immediate experience of psychoanalytic cure.—M. E. Morse (Baltimore).

4612. Steele, K. McL. *Psychiatric nursing*. Philadelphia: F. A. Davis, 1937. Pp. xiv + 370. \$3.50.—A textbook for nurses who are to care for psychiatric patients in the hospital or in the community. Practical procedures in psychiatric nursing, the place of mental hygiene, the nature of the specific diagnostic groups, legal aspects, and the historical background of psychiatry are the sections into which the volume is divided. Numerous illustrations, a glossary and a bibliography are included.—D. Shakow (Worcester State Hospital).

4613. Stern, E. *Über einen Fall von Schizophrenie im Kindersalter*. (On a case of schizophrenia in childhood.) *Schweiz. med. Wschr.*, 1936, No. 38.—Report of a boy studied by the author from the 11th to the 16th year, at which latter time the disease appeared clearly. The symptomatology at the earlier period which foreshadowed the appearance of the psychosis is discussed.—D. Shakow (Worcester State Hospital).

4614. Takamine, H. [On the correlation between complex work and momentary cognitive abilities in

psychoses and its diagnostic meaning.] *Psychiat. Neurol. japon.*, 1937, 41, 39-45.—The author studied systematically the correlation between the abilities of complex work and momentary cognition as a test to compare the mental ability of abnormal persons with that of normal ones, in order to ascertain whether we can get some diagnostic clue prior to the treatment of psychoses. When tested with complex work patients suffering from dementia praecox show in the early stages rather high marks, as in normal persons, but in the middle stages they suddenly drop; in brief, with the progress of disease, the ability quotient generally decreases, but there are slight differences in the form of descent in different cases. When given a momentary cognition test, however, degenerate persons and patients with early schizophrenia show a remarkably high quotient in comparison with that of normal persons. In persons of middle grade disease, such as nervous dyspepsia, traumatic neurosis, and schizophrenia, the ability for complex work decreases while that of momentary cognition increases; this is clearly seen when these two kinds of tests were given side by side, and it consequently offers us a convenient cue to determine the degree of disease. The fact that in the correlation between these two tests traumatic neurosis ranks first and is followed by schizophrenia, and that there is no significant correlation to be found in these cases, is a very important point in differentiating the kinds of disease. English summary.—R. Kuroda (Keijo).

4615. Tamm, A. Synpunkter på sinnesslövdäden. (Viewpoints on care of the feeble-minded.) *Soc. med. Tidskr.*, 1937, 14, 57-59.—Through several case examples Tamm illustrates the difficulty of diagnosing feeble-mindedness. The care of the feeble-minded in Sweden has had as its enthusiastic leader Alfred Petré, and the article is in his honor on his 70th birthday.—M. L. Reymert (Mooseheart Laboratory for Child Research).

4616. Trapp, C. E., & Schube, P. G. The reaction of certain psychotic types to alcohol. *J. nerv. ment. Dis.*, 1937, 85, 668-688.—A simple, inexpensive and safe method whereby it is possible to investigate by the use of alcohol the mental content of certain types of psychotic individuals is described. By its use it was possible to diminish temporarily certain types of mutism; to differentiate between stupors of dementia praecox and manic-depressive psychoses, and to probe the intellectual level underlying certain depressive states. Simple dementia praecox and certain types of mental deficiency could not be differentiated by this method. No permanent therapeutic benefit was noted.—C. R. Atwell (Boston Psychopathic Hospital).

4617. Westburgh, E. M. Introduction to clinical psychology, for students of medicine, psychology, and nursing. Philadelphia: Blakiston, 1937. Pp. xiv + 336. \$3.50.—The writer proposes to present clinical psychology as a body of organized knowledge and as a systemic technique of adjusting individuals to themselves and their environment. Following a

foreword by Dr. E. A. Strecker, there are 11 chapters, an appended outline for the clinical study of personality, and a bibliography. Clinical psychology is distinctly considered as a field much broader than psychometrics.—J. McV. Hunt (Brown).

4618. Wile, I. S. The next decade and education from the standpoint of mental hygiene. *Arch. Pediat.*, 1936, 53, 27.—(Courtesy *Child Developm. Abstr.*)

[See also abstracts 4556, 4561, 4566, 4624, 4628, 4629, 4632, 4640, 4655, 4685, 4694, 4696, 4698, 4699, 4700, 4744, 4806, 4831, 4870, 4879.]

PERSONALITY AND CHARACTER

4619. Chant, S. N. F., & Salter, M. D. The measuring of attitudes toward war and the galvanic skin reflex. *J. educ. Psychol.*, 1937, 28, 281-289.—33 university students, 14 of whom were men, were given Drob's *Attitude Toward War Scale*, No. 2, Form A, one question at a time, and the galvanic skin reflex associated with the response to each question was determined. Decision times were also obtained. The correlation between the degree of neutrality of a statement and the galvanic deflection was $.11 \pm .14$, and the correlation of the former with decision time was $.47 \pm .11$. "The general belief that attitudes are highly emotional is not borne out by this study. The emotional disturbance appears to be rather a function of conflict or the difficulty of making a decision."—A. W. Melton (Missouri).

4620. Corey, S. M. Professed attitudes and actual behavior. *J. educ. Psychol.*, 1937, 28, 271-280.—"The data presented in this study show overt behavior, as measured by the amounts students will change their test papers when allowed to do their own grading, is not related to attitudinal scores derived from a highly reliable questionnaire measuring verbal opinions toward cheating on examinations." 67 university students taking an introductory course in educational psychology were given five objective tests at one-week intervals to measure actual cheating. Attitudes toward cheating were determined by the Corey unsigned questionnaire, as described previously (*J. educ. Psychol.*, 1937, 28, 145-148).—A. W. Melton (Missouri).

4621. Dach, J. S. Die wesentlichsten Äusserungen der Persönlichkeit im Sprechen und in der Sprache. (Essential manifestations of personality in speech and language.) *Soldatentum*, 1937, 4, 124-129.—Speech form is concerned essentially with phonetics, language form with word choice, sentence structure, sentence combination and location. Even though at the same moment excessively individual influences converge, we are able to determine the essential character in a new personality. The linguistic peculiarities, particularly the following types, are emphasized: the energetic, impulsive type, the quiet, contemplative type, the melancholy type, the matter-of-fact, purposeful type, the sensitive-explosive (choleric) type, the weak-sensitive (ex-

citable) type, the anxious, insecure type, and the weak-vain type.—*P. L. Krieger* (Leipzig).

4622. **Eggert, M. A.** *Person und Rolle.* (Person and role.) Eendingen-Kaiserstuhl: Wild, 1937. Pp. 62.—*R. R. Willoughby* (Brown).

4623. **Friedmann, A.** *Wahrheit und Lüge.* (Truth and lie.) *Int. Z. indiv.-Psychol.*, 1937, 15, 72-79.—Science has abandoned the concept of inflexible truth. The boundary between truth and lie is sometimes hard to define. Forms of convention and courtesy are distinguished from lies. In an anti-social style of life, truth-telling can be used as a weapon as well as lying. Nevertheless, love of truth is the backbone of character. Truth is a superpersonal value. In youth veracity has something religious about it. The shaking of the belief in truth may precipitate a crisis. It is a mistake to laugh at young people for being too trusting. Love of truth grows. It cannot be educated directly. Trust is the basis of education and an intelligent critique is the pillar.—*M. F. Martin* (West Springfield, Mass.).

4624. **Groeneveld, A.** *La psychologie du travail.* (The psychology of work.) *C. R. Congr. med. Alién. Neurol., Bruxelles*, July 22-28, 1935.—In connection with child psychology, Groeneveld brings out the contrast between primitive aggression and the attitudes necessary for work. Primitive aggression is undeviating, simple and coercive, while work demands adaptation. The magical creative dreams of children are unfavorable to the work attitude. These infantile urges, especially if they remain unconscious, may cause marked inhibitions against work.—*M. E. Morse* (Baltimore).

4625. **Hořejši, J.** *Zur typologischen Untersuchung der Schüler an Mittelschulen.* (The typological examination of high school pupils.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 744-747.—The author has combined the typological systems of Kretschmer, Ribot, Jasper, etc., into a graded system with which he has tested 800 high-school pupils in Prague, some of whom could be followed up for a period of 12 years.—*H. Beaumont* (Kentucky).

4626. **Ikemi, T.** [Relation between constitutional types and mental phenomena.] *Yuseigaku (Hyogo)*, 1936, No. 155(5); 156(2).—The results of the study are as follows: as to constitutional types and their distribution, there seems to be little local but much racial relation among them. From this fact it will probably be said that heredity is an important factor in type formation. There is no special relation between types and intelligence quotient. Myopes are found more in the pyknic type than in the leptosome one, and there appears to be some relation between vision and the condition of growth. Kretschmer's opinion concerning constitutional types and character could be confirmed in this study also. No correlation can, however, be seen between types and performance. It is an important problem what factor of a character is involved if it is assumed that constitutional types are altered with age. English summary.—*R. Kuroda* (Keijo).

4627. **Koshuk, R. P.** *Problems for sociological research in personality development.* *J. educ. Sociol.*, 1937, 10, 464-469.—Since sociologists find personality to be the core of socio-psychological theory, and since social interaction begins at birth, the author emphasizes the importance and necessity of having the sociologists enter cooperative research programs on personality development. As problems in such a program the author suggests: (1) more precise analyses of social environment; (2) the application of experimental techniques to determine the differential reactions of the child to different social groups; (3) further study of children in different social strata of the same culture; (4) comparative studies using identical techniques with children in different culture groups; and (5) the effects of economic insecurity and rapid change of status upon the growing child.—*W. McTeer* (Wayne University).

4628. **Lewis, M. F.** *Alcoholism and family case work.* *Family*, 1937, 18, 39-44.—Examination of the case records of alcoholics in the light of modern theory suggests that the alcoholic man suffers from a conflict between masculine and feminine impulses. In his drinking bouts he works out a wish for the companionship of men and the desire to receive by mouth something potent enough to overwhelm him. These impulses are accompanied by an enormous amount of hostility toward his wife and children. The relationship between the man and his wife is extremely complicated. The woman finds an outlet for her aggressive impulses in a partnership with a man who is partially dependent and who creates situations that almost force her to punish him. Both partners, therefore, alternate between a "masculine" and a "feminine" position. Since cure of chronic alcoholism is extremely difficult, the goal of the case worker should be a diminution of the number of sprees and a lengthening of the intervals between. The author feels this is best done by assisting the man to achieve a masculine role in the face of society and by supporting the woman's desire to help her husband.—*M. Keller* (Brown).

4629. **Moraitis, D.** *Der lebende Tote.* (The living dead.) *Int. Z. indiv.-Psychol.*, 1937, 15, 80-82.—A Greek boy of 18, deformed by a birth injury, had been preoccupied from early childhood with thoughts of death, which he conceived as a release from his deformed, awkward body and a new life for a second personality. After treatment his split personality and fear of life disappeared.—*M. F. Martin* (West Springfield, Mass.).

4630. **Pulay, E.** *Der überempfindliche Mensch.* (The oversensitive person.) Leipzig: Lorenz, 1936. Pp. 278. RM. 4.60.—*R. R. Willoughby* (Brown).

4631. **Reinhardt, J. M.** *Heredity and environment: a re-examination of some evidence from studies of twins with emphasis upon the graphological method.* *Character & Pers.*, 1937, 5, 305-320.—Psychography is of aid in studying personality, but it does not as yet provide a basis for determining the relative importance of heredity and environment as determinants of personality. This

is true because the importance of either varies with the specific conditions of life which prevail, as is suggested by the study of twins.—*M. O. Wilson* (Oklahoma).

4632. Roeder, M. Gregorovius über Lucrezia Borgia. (Gregorovius on Lucrezia Borgia.) *Int. Z. indiv.-Psychol.*, 1937, 15, 82-89.—According to Gregorovius, Lucrezia Borgia grew up with the idea that woman is the weak tool of the all-powerful male, and her only weapon is beauty. Her three husbands were all chosen by her father and her brother, who used her to form alliances with powerful families and did not hesitate to murder one husband to make room for the next. When her brother murdered her second husband, she fell ill, a typical expression of neurotic passivity. After her father died her brother lost his power; the rest of Lucrezia's life was happy, and she was much loved for her beauty, goodness, gentleness, piety, and charity.—*M. F. Martin* (West Springfield, Mass.).

4633. Stavěl, J. Zum Aufbau der Psychodiagnostik. (The structure of psychodiagnostics.) *C. R. 8. Conf. int. Psychotech., Prague*, 1935, 378-385.—A complete diagnosis of personality involves several aspects the structure of which has been little investigated. In addition to the questionnaire method, there must be an analysis of behavior and of expression (graphology). The order in which these are arranged depends on the individual case, but should not be left to chance. A suggested sequence is: (1) graphological analysis (unknown to the subject); (2) questionnaires: (a) statistical treatment of special blanks (one based on Kretschmer's types, one on Jung's, a psychoneurotic inventory, and an interest questionnaire). (b) comparison of these data with the graphological analysis, (c) personal history blank; (3) observation and diagnosis of behavior; (4) interview with the subject. This arrangement makes possible a better approach to and understanding of the subject, who is relatively well known to the examiner before reporting for the interview.—*H. Beaumont* (Kentucky).

4634. Suter, J. Konstitutionstypen. (Constitutional types.) *C. R. 8. Conf. int. Psychotech., Prague*, 1935, 385-388.—The experience of the Psychotechnical Institute of Zürich permits the following conclusions: (1) The type concept is valuable in individual diagnosis, especially when the constitutional characteristics of the subject are clearly understood. (2) Tests of various sorts are valuable for diagnosis and prognosis, especially when they permit the observation of constitutional characteristics. (3) In addition to these constitutional characteristics, the psychotechnician should determine general and individual abilities and use anamneses to investigate the individual's experiences. (4) Psychotechnical institutes should collaborate with each other and with other psychological clinics to perfect psychological theories and methods in connection with man's natural constitution.—*H. Beaumont* (Kentucky).

4635. Symonds, P. M. Happiness as related to problems and interests. *J. educ. Psychol.*, 1937, 28, 290-294.—Large groups of high school, college, and graduate education students ranked their "problems" and "interests" in 15 life areas, e.g., health, sex, money, safety, and checked a 7-point self-rating scale of general happiness. Happy and unhappy students are very similar in their problems and interests, but happy students are more concerned with affairs outside themselves than are unhappy ones.—*A. W. Melton* (Missouri).

4636. Toulouse, E. Biotypologie et psychotechnique. (Biotypology and psychotechnics.) *C. R. 8. Conf. int. Psychotech., Prague*, 1935, 657-659.—Biotypology is the basis of a rational study of man, representing the necessary coordination of psychological, psychotechnical and psychiatric researches. The newly (1932) founded French society of biotypology aims to investigate the relationships between morphological, physiological, psychological, pathological and psychiatric characteristics and to apply these data to the various branches of human life: eugenics, pathology, psychiatry, pedagogy, vocational orientation and selection, rational organization of work, and crime prophylaxis. Such studies have included a thorough examination of 100 Parisian school children, including the following measures: anthropometric, morphological, sexological, chemical, psychological, physiological, psychiatric and general medical. A similar study was made to determine the influence of parental syphilis on children.—*H. Beaumont* (Kentucky).

4637. Wallon, H. L'étude du caractère chez l'enfant et l'orientation professionnelle. (Study of the child's character and professional orientation.) *C. R. 8. Conf. int. Psychotech., Prague*, 1935, 388-390.—Clinical and statistical studies of character should be added to the questionnaire method in order to develop the equivalent of the testing technique for intellectual capacities. When more becomes known of character we shall have to revise our distinctions between mental and physical, subject and object, individual and environment.—*H. Beaumont* (Kentucky).

4638. Wiersma, E. D. Iets over den opbouw van karakter en temperament. (The development of character and temperament.) *Mensch en Maatsch.*, 1937, 13, 241-255.—The individual's temperament and his behavior tendencies together constitute his character. His activities are subject to his will, but volition is influenced by tendencies which may be constitutional, acquired, or both. Hence when we judge a person's behavior we really express a judgment concerning his tendencies. The extent to which the individual should be held responsible for his behavior depends on the degree to which the tendency which caused it was acquired or inherited. Temperamental characteristics (activity, emotionality, self-control) can be developed through suitable exercises; higher motives should be emphasized in school in order to help the child select the best possible outlet for existing tendencies and develop

the most desirable acquired tendencies. This constitutes moral education, in which the schools can make a notable contribution. It passes through the same stages as intellectual development: from blind acceptance through habit formation to an understanding evaluation.—*H. Beaumont* (Kentucky).

4639. Yoshida, S. [Some conspicuous cases of morbid character seen in reformatory juveniles.] *Brain, Ment. Hyg. Mon.*, 1937, 2, 16-40.—On the basis of the author's classification of morbid characters formerly reported, namely, an unstable type, an excitable type, and a mixed type of nervousness, excitability, and hysteria, he picked out one case for each class and described their characteristics in detail. English summary.—*R. Kuroda* (Keijo).

[See also abstracts 4516, 4531, 4534, 4565, 4640, 4662, 4676, 4687, 4697, 4710, 4717, 4719, 4720, 4783, 4828, 4829, 4830, 4842, 4847, 4848, 4849, 4859, 4860, 4864, 4871.]

GENERAL SOCIAL PROCESSES

(incl. Esthetics)

4640. Adler, A. Selbstmord. (Suicide.) *Int. Z. indiv.-Psychol.*, 1937, 15, 49-52.—From childhood the potential suicide is the person who thinks too much about himself, and plays, lives, and strives too little with other people. In his overestimation of his own value he always expects favorable results from great efforts. He is a bad loser. He tries to work on the sympathy of other people by complaints, sadness, and sufferings. Fantasies in which he is sick or dead parallel a belief in his great value to others and their pain at losing him.—*M. F. Martin* (West Springfield, Mass.).

4641. Anderson, J. E. An evaluation of various indices of linguistic development. *Child Developm.*, 1937, 8, 62-68.—Five samples of 150 words each from the compositions of each of 111 college students were analyzed as to length of sentence, variability in sentence length, proportionate number of subordinate predicates, and proportionate number of personal pronouns. "For the selected group used in this study none of the indices show significant relationship to age, sex, college aptitude, Iowa English scores, or high school rank."—*F. D. McTeer* (Wayne University).

4642. Cheslock, L. Violin shifting. *Bull. Amer. musical. Soc.*, 1937, No. 2, 26-27.—This study of violin shifting is based on over 600 records of various types of point-of-light and motion picture photography of the actual motions involved.—*P. R. Farnsworth* (Stanford).

4643. Corso, R. [The matriarchate of the Cunana in relation to that of African populations.] *Atti Soc. ital. Progr. Sci.*, 1935, 3, 373.—*L. Canestrelli* (Rome).

4644. Davis, E. A. Mean sentence length compared with long and short sentences as a reliable measure of language development. *Child Developm.*, 1937, 8, 69-79.—"In analyzing 21,800 remarks of

436 children, 5½ to 9½ years of age, the writer found that nearly twenty per cent were of only one word, while on the other hand there were many sentences that reached twenty, thirty, and even fifty words." "Group differences were constant whether the longest sentence, the mean of five longest sentences, or the mean of fifty remarks is employed as the measure of language development." "There is a slight positive relationship between length of remark and I.Q." "The use of one word remarks is very consistent for individual children"; this characteristic decreases somewhat with age but seems to depend "upon other factors than mental development." "The reliability between odd and even remarks of individual members is much greater than the resemblance between like-sexed twin pairs."—*F. D. McTeer* (Wayne University).

4645. Eisenson, J. A note on the perseverating tendency in stutterers. *J. genet. Psychol.*, 1937, 50, 195-198.—A battery of tests given to matched groups of stutterers and non-stutterers gives results indicating a greater tendency on the part of stutterers to resist change—a greater tendency for their neurons, once excited, to persist in the original state of excitation. The hypothesis is proposed that stuttering itself is an indication of resistance to change, and hence a manifestation of the phenomenon of perseveration.—*E. Heidbreder* (Wellesley).

4646. Ellis, H. Sex in contemporary life. *Marriage Hyg.*, 1937, 3, 275-278.—Through the changes in the social attitudes toward sex which have occurred in the past 50 years a greater degree of verbal freedom has been achieved and accurate information on the physiology of sex has become increasingly available. The sexual status of women has also been greatly modified. In periods of transition extreme reactions inevitably occur. One such extreme reaction is that from the old attitude of secretive mystery to the assertion that we are concerned with a commonplace animal function, to be treated on the same level as the excretory functions. The sex function, however, differs from other physiological functions in that it requires the cooperation of another individual and, when completely fulfilled, is concerned with the unborn generations to whom it will give life. In considering the problem of the repression and expression of the sexual impulse, it should be noted that both exist throughout nature and are biologically essential. The difficulties surrounding the sexual impulse are not merely social and to be removed by social changes. They are ultimately biological, that is anatomical, physiological, biochemical, and psychological.—*M. Keller* (Brown).

4647. Ferreri, G. [The electroacoustic analysis of language.] *Riv. Educ. D.-M. Fonet. biol.*, 1935, No. 1, 4-14.—After having described the recent discoveries in the electroacoustic study of language, the author takes into consideration the possibility of applying it to the education of deaf mutes, and offers a few practical suggestions.—*L. Canestrelli* (Rome).

4648. Fishman, H. C. "A study of the efficiency of negative practice as a corrective for stammering." *J. Speech Disorders*, 1937, 2, 67-72.—Three cases of stammering characterized by repetition of words and initial letters of words and two cases characterized by "severe blockage" were given negative practice for one month in order to study the effect of the latter. The three cases characterized by word repetition "showed definite improvement." The two cases of speech blockage "definitely increased in stammering" after negative practice. The author concludes that word repetition is definitely a habit and can be eliminated by this method. Speech blockage is not a habit, and another explanation for this type of speech defect is needed.—C. V. Hudgins (Oberlin).

4649. Gemelli, A. *L'opera di C. Bühler nella psicologia del linguaggio*. (K. Bühler's contribution to the psychology of language.) *Arch. ital. Psicol.*, 1937, 15, 82-85.—The author summarizes and reviews critically Bühler's theory of language, especially as expressed in his *Sprachtheorie, die Darstellungsfunktion der Sprache* (see IX: 5238). It has been well received by philologists and philosophers, but has not received much attention from psychologists, probably because Bühler's treatment, although an "able, honest, clear systematization of facts" from many fields, lacks the originality "through which it might be fruitful, whether by giving a new point of view or by stimulating new research."—C. J. Herrick (Pennsylvania).

4650. Gerum, —. *Erb- und Rassenpflege durch das Gesundheitsamt*. (Eugenics and racial culture through the public health service.) *Umschau*, 1937, 41, 11.—J. Deussen (Freiburg).

4651. Gurnee, H. A comparison of collective and individual judgments of fact. *J. exp. Psychol.*, 1937, 21, 106-112.—"Several aggregations of persons were presented different lists of statements on various matters of fact. Each aggregation checked the truth or falsity of the statements, operating at first individually and then as a group. The group judgments were obtained usually by a vote of acclamation. The performance of the group, in terms of frequency of correct responses, not only exceeded that of the average member, but equaled or approximated that of the best member. The existence of a probable law of collective action was indicated, namely, that by simple collective action the frequency of correct judgments of a group of persons will be increased approximately two sigmas over the average of their individual responses. The major reason for the group superiority was pooling of individual judgments. But analysis showed that pooling could not account for all the superiority; social influences were also operating. Uncertain members tended to be influenced to vote in the direction of the most vigorous response, and this response, in the long run, was apt to be oftener right than wrong, at least in most situations of this experiment."—H. W. Karn (Pittsburgh).

4652. Gutzmann, H. [Speech disturbances in children and their correction.] *Gesundh. u. Erzieh.*, 1935, 48, 233.—Gutzmann discusses the various speech defects in children who have no anatomic deformities and no mental disturbance. These are stuttering, stammering, word deafness and disturbances of the voice. He stresses the importance of a complete history and thorough physical and mental examination, with an evaluation of the parental and environmental factors. Psychotherapy and training are of importance. The methods already in use should be stopped; instead the parents should be given written instructions to follow. Special schools and classes are of value. Stammering is often due to organic changes. Thus a thorough examination for defects should be undertaken. Word deafness may be difficult to identify, but one should suspect this when there is a delay in the time of talking. The use of a mirror is helpful in this type, but continued cooperation of the parents, instructor and child is essential. Disturbance of the voice itself is most frequently caused by so-called voice nodules. Excess crying may be responsible, and it is seen more commonly in urban than in country communities. Certain infections, such as tuberculosis, may also cause hoarseness. Harmonic vibrators and electromechanical tone control together with local therapy may be useful in this type of disturbance. The author believes that the earlier these various types of disturbance are treated the better the prognosis.—(Courtesy *Child Developm. Abstr.*)

4653. Hahn, E. An integration of stuttering therapies. *J. Speech Disorders*, 1937, 2, 87-94.—Speech correction is receiving increasing attention from school administrators. The benefits of this awakening interest will be lost unless some means are taken to eliminate the confusion caused by conflicting theories of therapy. The author suggests that a committee consisting of speech pathologists could find common denominators among the numerous conflicting theories and present them to the American Speech Correction Association for acceptance.—C. V. Hudgins (Oberlin).

4654. Horkheimer, M. [Ed.] *Studien über Autorität und Familie*. (Studies on authority and the family.) *Schr. Instit. Sozialforsch.*, 1936, 5. Pp. 947.—This volume is a collection of research reports on the problem of authority and the family. The first section contains three theoretical papers: M. Horkheimer gives a historical and theoretical sketch of the recent role of family authority in the maintenance of our social order. E. Fromm analyzes the psychological dynamics of submission to authority, making use of Freudian concepts such as ego, super-ego, and sado-masochism; he attempts to show how the psychological phenomena are dependent on the family and society and how they function therein. H. Marcuse discusses conceptions of freedom and authority prevalent in the history of western European thought. The second section reports results from several extensive questionnaire studies: questionnaires about numerous attitudes.

activities, and living conditions filled out by 700 German skilled workers and clerical employees in 1930-31; questionnaires about post-war changes in sexual morality filled out by 245 German medical men; questionnaires about family relationships filled out by thousands of young people and 589 experts in several European countries from 1933 on; finally, two investigations of the unemployed in Europe and in the United States. The third section contains long summaries of the recent literature on authority and the family, and a number of individual monographs and abstracts reporting special theoretical or bibliographical aspects of the general problem. Abstracts of all articles appear in French and in English at the end of the volume.—*I. L. Child* (Yale).

4655. Johnson, G. B. A psychiatrist's services in a family agency. *Family*, 1937, 18, 50-54.—This article describes the plan whereby the Family Service Society of Buffalo makes most efficient use of the psychiatric services of Samuel W. Hartwell. Four case histories in which psychiatric advice was of great value are reviewed.—*M. Keller* (Brown).

4656. Johnson, W., & Solomon, A. Studies in the psychology of stuttering: IV. A quantitative study of expectation of stuttering as a process involving a low degree of consciousness. *J. Speech Disorders*, 1937, 2, 95-97.—13 stutterers read 1000 words each under four conditions. Each was requested to mark the words on which stuttering was anticipated before the readings began. Unmarked duplicate copies were used in the readings at intervals from immediately after the marking up to seven days. One reading was recorded by electrical transcription. Results show that stuttering occurred on 53% of the words on which it was anticipated, and on 10% of the words on which it was not anticipated. The results indicate that "expectation of stuttering not only functions in relation to the precipitation of moments of stuttering, but also that it need not operate on a highly conscious level."—*C. V. Hudgins* (Oberlin).

4657. Johnson, W., & Sinn, A. Studies in the psychology of stuttering: V. Frequency of stuttering with expectation of stuttering controlled. *J. Speech Disorders*, 1937, 2, 98-100.—Experimental methods were set up to investigate the following questions: (1) What is the effect on the frequency of stuttering when expectation of stuttering is not permitted to affect the speech? (2) Is there a tendency for stuttering to be expected on words previously stuttered? (3) Is there a tendency for apparently unexpected stuttering to occur on words previously stuttered? The results show that when "expectation of stuttering" is eliminated stuttering is reduced 98%. Questions 2 and 3 are answered in the affirmative. The authors conclude that stuttering is quite as important as a stimulus as it is as a response. The importance of this fact for the therapist lies in his ability to find means of eliminating the stimulus value of stuttering.—*C. V. Hudgins* (Oberlin).

4658. Johnson, W., & Millsapps, L. S. Studies in the psychology of stuttering: VI. The role of cues representative of past stuttering in the distribution of stuttering moments during oral reading. *J. Speech Disorders*, 1937, 2, 101-104.—26 stutterers read a standard 180-word passage nine times each. The words stuttered were checked by the experimenter at each reading. After the third and sixth readings each word stuttered were marked out with a heavy black pencil, and the subjects eliminated these words on the following repetitions. The results showed that while the stuttering was greatly reduced after the stuttered words were eliminated, some of the subjects still stuttered on remaining words throughout the nine readings. Analysis showed further that more of the stuttered words of the later readings were adjacent to previously stuttered words. The indication is that stuttering does not necessarily occur only on certain words, but "it is indicated quite as clearly that stuttering does occur with marked consistency in relation to cues representative of past stuttering."—*C. V. Hudgins* (Oberlin).

4659. Johnson, W., & Rosen, L. Studies in the psychology of stuttering: VII. Effects of certain changes in speech pattern upon the frequency of stuttering. *J. Speech Disorders*, 1937, 2, 105-109.—18 adult stutterers were required to read 15 500-word passages. The first three passages were read in the subject's "customary speech pattern," and the remaining ones were read using prescribed "speech patterns, different from the characteristic one." The number of words stuttered was highest in "fast" reading. The number decreased from this through the following methods of reading: customary, low intensity, slow, high-pitched, sing-song, with metronome, chorus stutterer, chorus normal, arm-swing, and singing. The last type showed no words stuttered, and the three types preceding the last showed only one word stuttered for each type. The authors consider the factor of distraction as a possible explanation for the decrease in frequency under the various types of speech patterns.—*C. V. Hudgins* (Oberlin).

4660. Kantner, C. E. Four devices in the treatment of rhinolalia aperta. *J. Speech Disorders*, 1937, 2, 73-76.—The author describes four devices for the treatment of nasal voices caused by an incomplete closure of the velum.—*C. V. Hudgins* (Oberlin).

4661. Katzenstein, B. Vergleichende psychologische Untersuchung über die Intelligenz der vom Lande in die Stadt abgewanderten Jugendlichen. (A comparative psychological study of the intelligence of rural youth migrating to the city.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 695-696.—In southern Germany migration from rural districts to the city as a group phenomenon was found to depend not merely on intelligence or ability to adjust, but also on economic and political conditions. During the past two decades few families have migrated, but many adolescents have done so for

the purpose of learning or practicing a trade.—*H. Beaumont* (Kentucky).

4662. **Koens, A. J.** *De psychologie van het schelden.* (The psychology of name calling.) *Mensch en Maatsch.*, 1937, 13, 256-272.—Calling people names is a spontaneous, irrational attempt at relieving tension, undertaken as a means of defense by a person in conflict with the outside world. It indicates the presence of fear and of a weakness which may be due to a lack of harmony between the ego, super-ego, and id. Autistic thinking becomes verbal, and a magical factor is present when a person calls the inanimate object on which he has hurt himself a name and when he applies names to persons who have crossed him. Symbolic names used by different groups of people and individuals reveal the particular conflicts that are most prevalent in those groups or persons, and may be animalistic, spiritual, inanimate, but also sexual, phallic or anal. Their symbolic power is attested by the legal code which permits civil action against the user of such language.—*H. Beaumont* (Kentucky).

4663. **Lehman, H.** *The creative years: "best books."* *Sci. Mon.*, N. Y., 1937, 45, 65-75.—The chronological ages at which men have most frequently published books that are good and that are permanently great can be ascertained by assembling data separately for the various age groups, and by scrutinizing the performance record of each age group. The data suggest that literary masterpieces of the first rank have been published most frequently by men who were not over 45 years of age.—*O. P. Lester* (Buffalo).

4664. **Males, B.** [The pure Dinarics.] *Atti Soc. ital. Progr. Sci.*, 1935, 3, 366-369.—*L. Canestrelli* (Rome).

4665. **Mariz, J.** *Perspectivas psiquiatricas de alguns rasgos totémicos y tabús do indígena Brasileiro.* (A psychiatric perspective on some totemic and tabu beliefs of the aborigines of Brazil.) *Arch. Assist. Psicopat. Pernambuco*, 1936, 6, 2-37.—The theoretical views of Freud on totems and tabus are reviewed and applied to an interpretation of the mores of the natives of interior Brazil.—*R. M. Bellows* (U. S. Employment Service).

4666. **Masuoka, J.** *Changing moral bases of the Japanese family in Hawaii.* *Sociol. soc. Res.*, 1936, 21, 158-169.—In Hawaii the Japanese family system is undergoing changes. Filial piety, ancestor worship, and the attitudes of solidarity and cooperation for the good of the family are giving way to an emphasis on the individual. A discussion of the forces conditioning these changes is included.—*O. P. Lester* (Buffalo).

4667. **McKain, W., & Anderson, C.** *Assortative mating.* *Sociol. soc. Res.*, 1937, 21, 411-418.—Data regarding ages of husbands and wives at time of marriage, from random samples taken from marriage registers for the years 1928-1933 in two rural Tennessee counties, in Winchester, Mass., in Birmingham, Ala., and in Youngstown, Ohio (in

Youngstown data were also obtained for the years 1906-1910), reveal a greater similarity of ages of husbands and wives during depression years than in more prosperous years. The suggested interpretation is in terms of a general sobering effect of depression conditions. Women who are employed have an enhanced appeal (and presumably they are older). Restrictive opportunities for social life enhance the value of compatibility and common interests, which are more likely to be found in similar age groups. Sex, in the narrower sense, tends to recede as an element in selection.—*O. P. Lester* (Buffalo).

4668. **Mueller, A. D.** *Ethik. Der Weg der Verwirklichung des Guten.* (Ethics: the way of realization of the good.) Berlin: A. Töpelmann, 1937. Pp. 468. M. 7.50.—*A. Römer* (Leipzig).

4669. **Mukerji, R.** *Theory and art of mysticism.* New York: Longmans, Green, 1937. Pp. 324. \$5.50.—An objective explanation of the mystical life and experience. The author is professor and head of the department of economics and sociology at Lucknow University.—*R. R. Willoughby* (Brown).

4670. **Nottingham, R. D.** *A psychological study of 40 unmarried mothers.* *Genet. Psychol. Monogr.*, 1937, 19, 157-228.—This is a report on a study of the mental ability, school achievement, personality make-up, vocational interests, attitudes, and social, economic and religious background of 40 unmarried mothers. It is a part of a larger study now in progress at the Florence "Crittenton" Home in Columbus, Ohio. 60% of the unmarried mothers were found to have come from broken homes. Housework seems to have been a contributing factor in this problem of delinquency. 45% were of normal mentality. From the result of statistical study of the data in the present instance, it is planned to attempt the construction of a single test which will have prognostic significance. The author hopes that this would open the road "for a national study of the problems of the unmarried mother." 22 references are given.—*F. M. Teagarden* (Pittsburgh).

4671. **Ortmann, O.** *A theory of tone quality.* *Bull. Amer. musicol. Soc.*, 1937, No. 2, 3.—Quality is not a fourth primary attribute independent of pitch, intensity and duration. Rather it is a secondary attribute. "The definition of quality as pitch-complex is inadequate, since it does not include quality differences for pure tones of different pitch or those resulting from duration variations."—*P. R. Farnsworth* (Stanford).

4672. **Parsons, L. S.** *Factors influencing the response of clients to family case work after referral to another agency for financial assistance.* *Smith Coll. Stud. soc. Work*, 1937, 7, 325-356.—"The purpose of this investigation was to study the use which clients were making of the 'family consultation service' of the Associated Charities, Cincinnati, Ohio. It dealt with the 32 families who were kept as clients of the agency after the Hamilton County Welfare Department had assumed responsibility for their financial assistance." Consultation service

provided a definite means of assisting 23 of 32 families in problems other than those associated with their relief needs. Factors influencing the successful continuation of consultation service were the client's understanding of his own needs and the assistance offered by the agency, and also the ease with which the case worker saw the needs of the client.—R. H. Brown (Clark).

4673. Petran, L. A. An analysis of the Ortmann tests in tonal discrimination and memory. *Bull. Amer. musicol. Soc.*, 1937, No. 2, 27.—At the Peabody Conservatory of Music 500 students have been tested on a battery which measures discrimination for pitch, rhythm, and fusion, and memory for pitch, rhythm, melody, and harmony. Reliabilities varied from .86 (pitch memory) to .30 (melodic memory). That for the battery as a whole was .80. Validities (correlations with the weighted averages of conservatory grades) varied from .45 (chord memory) to .25 (rhythm memory). That for the whole battery was .57. The highest intercorrelational value found was that between the tests of pitch and chord memory (.46); the lowest was that between fusion and the tests of pitch discrimination, rhythm discrimination and rhythm memory (all about .11).—P. R. Farnsworth (Stanford).

4674. Pettazzoni, R. La confessione dei peccati: metodo e risultati. (Confession of sins: method and results.) *Scientia, Bologna*, 1937, 61, 226-232.—The practice of the confession of sins characterizes the religions of primitive peoples, the extinct ancient religions, and some contemporary ones. The function of confession in its most elementary form is almost exclusively that of expiation of a sexual sin by word magic. The value of confession lies in catharsis. Confession probably originated in some primitive society of a highly matriarchal complexion. The author outlines the ideal features of a complete study of confession.—D. W. Chapman (Recorder's Court, Detroit).

4675. Pigors, P. Types of leaders in group work. *Sociol. soc. Res.*, 1936, 21, 3-17.—An abbreviated and adapted form of Winkler-Hermaden's questionnaire was submitted to group workers in Boston, Mass., and Rochester, N. Y. Although many workers fall into a mixed-type classification, there is some evidence for a "master" and "educator" type of leader which is closely identified with the "autocratic" and "democratic" leader described by Bogardus. The "master type" has more of a desire for self-expression, is extravertive, is interested in personal ascendance and in an older age range of followers (11-16); the characteristic trait is egotism. The "educator type" is more desirous for service, is introvertive, is interested in the development of followers, prefers a younger age group (7-11), has a tendency toward self-doubt; the characteristic trait is sympathy.—O. P. Lester (Buffalo).

4676. Pintner, R., Forlano, G., & Freedman, H. Personality and attitudinal similarity among classroom friends. *J. appl. Psychol.*, 1937, 21, 48-65.—Analysis of data on 819 children in grades 5 to 8

reveals that chronological age and mental age are more related to choice of friends than personality and attitude test scores.—R. S. Schultz (Psychological Corporation).

4677. Porteus, S. D. Primitive intelligence and environment. New York: Macmillan, 1937. Pp. x + 325. \$3.00.—In an attempt to eliminate cultural effects from the study of racial differences in mental capacities, this investigator has compared two races of primitive people. He describes briefly the aborigines of central Australia (previously described by him in 1929) and more fully (in the form of a travelogue) the Bushmen of the Kalahari desert in Africa. Intelligence is defined as "the capacity to enlarge the significance of the environment," and capacity in dealing with 4 realms of the environment are considered pertinent to racial comparisons: (1) abstract learning capacity, (2) capacity for social organization, (3) capacity to manipulate things, (4) imaginative skill. The abstract learning capacity of these two races is compared by means of a group of tests including Porteus' maze test, footprints test, tests of rote memory, and Leiter's performance scale. Australian aborigines proved superior to Kalahari Bushmen. Social organization is not considered. Capacity to manipulate the world of things is compared roughly by considering the relative efficiency with which each race has utilized the resources of the land inhabited. Apparent Australian superiority here is in agreement with the test results. Only illustrative imaginative products are described. The book is interspersed with critical discussions of the problems involved in the study of racial differences.—J. McV. Hunt (Brown).

4678. Robbins, S. D. The cause of reading disabilities and their remedy. *J. Speech Disorders*, 1937, 2, 77-83.—Discussion of the relation between reading disabilities and speech defects, types of reading disabilities, their causes, diagnosis and treatment.—C. V. Hudgins (Oberlin).

4679. Rutherford, B. R. The therapeutic value of cerebral dominance in treatment of the speech of spastics. *J. Speech Disorders*, 1937, 2, 111-115.—The author finds that in some cases speech defects improved or cleared with general improvement in physical coordination, while others showed improvement in speech with no apparent improvement in physical coordination; likewise he finds cases in which no improvement in speech was apparent even though physical coordination improved. He also finds that some cases of stuttering improved when "emphasis was placed upon the crippled hand," while others become worse. Three case histories are cited, presenting three different types of spastic stutterers who were cured of their speech defect by establishing cerebral dominance in one of the hemispheres. The methods are presented briefly.—C. V. Hudgins (Oberlin).

4680. Sabatini, A. [Anthropology of the Tebù.] *Atti Soc. ital. Progr. Sci.*, 1935, 3, 384-385.—L. Canestrelli (Rome).

4681. Sabatini, A. [The value of dermatoglyphics as a distinctive character of races.] *Atti Soc. ital. Progr. Sci.*, 1935, 3, 386-387.—*L. Canestrelli* (Rome).
4682. Schmid, J. J. v. Het evenwicht in het maatschappelijk leven. (Equilibrium in social life.) *Mensch en Maatsch.*, 1937, 13, 273-278.—The concept of social equilibrium was introduced in sociology when it changed from a natural to a social science. Spencer and Comte recognized it in connection with the dualism of method and purpose, freedom and predestination; Pareto in the example of the desire for wine and the realization that it is injurious to one's health. Like individuals, social groups may be balanced or unbalanced, depending on the presence or absence of harmony between their objectives and reality.—*H. Beaumont* (Kentucky).
4683. Schneider, J. Social class, historical circumstances, and fame. *Amer. J. Sociol.*, 1937, 43, 37-56.—The basic assumption of this study is that the total number of persons who become famous in an area at any given time is determined by historical circumstances and situations. Data from the *English Dictionary of National Biography* are presented to indicate (1) that the kind of eminence a person is likely to achieve is limited by his social origin; (2) that it is not always easy to attain fame in the same activity during different historical periods; and (3) that during periods of expanding opportunity many activities appear which, because of their nature, are open to persons of the laboring group in a population who have the requisite talent and inclination. Contrary to the views of Havelock Ellis, Frederick Woods, and Pitirim Sorokin, the decline in the absolute and relative number of eminent men of genius produced by the English working classes after the 1800 birth period is apparently not due to biological deterioration but to a curtailment of opportunity such as follows every age of great achievement.—(Courtesy *Amer. J. Sociol.*)
4684. Schönfeld, W. Die graphologische Intelligenzbeurteilung. (Graphological judgments of intelligence.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 699-700.—The graphologist judges intelligence not on the basis of single characteristics but according to the total quality and type of the individual's handwriting. Most attributes of intelligence can thus be observed, but memory and genius are exceptions. Types of intelligence can be discovered as well as grades of ability, and so graphologists can serve vocational guidance as well as vocational selection.—*H. Beaumont* (Kentucky).
4685. Schwalbe-Hansen, P. Om "ordblinde" børn. (Concerning "word-blind" children.) *Ugeskr. Laeg.*, 1937, 99, 520-522.—A general discussion of "congenital dyslectic" children (defined as children with a decreasing ability to learn to read by normal instruction, even though they are of normal general intelligence), based mainly upon 14 cases referred to the child psychiatric clinics in Copenhagen. The city now has 30-40 such children in special classes.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).
4686. Servien, P. Le langage des sciences. (The language of the sciences.) *Scientia, Bologna*, 1937, 61, 201-209; 261-272.—The basic property of the language of science is that it is built of phrases such that they may be replaced by other precisely equivalent phrases, as in the case of the mathematical equation. This fundamental property implies several others: fixed and agreed-upon meaning of phrases, the existence of contradictory and of "null" phrases, and the possibility of summary. The language of science is therefore a restricted body within language in general, being independent of such features as rhythm and intuitive meanings. Its syntax is more limited; and it contrasts with the language of poetry or philosophy. Contributions to the language of science come from three main sources: from the field itself (as in mathematics), from the attempt to describe the physical universe, and from efforts to make rigorous the material of esthetics.—*D. W. Chapman* (Recorder's Court, Detroit).
4687. Smith, M. Spontaneous change of attitude toward war. *Sch. & Soc.*, 1937, 46, 30-32.—From 1932 to 1936 students in the elementary sociology courses at the University of Kansas were given the Droba attitude-toward-war scale at the beginning and end of the semester. The course material was treated objectively and no attempt was made to influence the attitudes of the students. There was an average shift of 0.5 of a scale point in the direction of pacifism for the 282 subjects, the women being slightly more antagonistic to war both before and after the course. This shift the author does not feel to be attributable to the influence of the course, but it may be regarded as a "generalized standard of spontaneous change" with which studies of induced attitude change may be compared.—*M. Lee* (Chicago).
4688. Smith, M., & Nystrom, W. C. A study of social participation and of leisure time of leaders and non-leaders. *J. appl. Psychol.*, 1937, 21, 251-259.—Two groups of leaders and non-leaders among high school students were selected by teachers. Leaders were found to participate more in extra-curricular activities, to obtain more special recognition in such activities, and in general to devote more actual time to leisure activities.—*R. S. Schultz* (Psychological Corporation).
4689. Summers, M. A popular history of witchcraft. New York: Dutton, 1937. Pp. 292. \$2.75.—A study of black magic and witchcraft from earlier times to the present day, showing its presence in our modern politics and social life.—*R. R. Willoughby* (Brown).
4690. Vaerting, M. [The dominant sex.] Milan: V. Bompiani, 1935. Pp. 316. L. 12.—Psychological study of the sexes; differential characteristics of the sexes. Sexual component, education and supremacy of the male sex.—*L. Canestrelli* (Rome).

4691. Van Riper, C. The effect of penalty upon frequency of stuttering spasms. *J. genet. Psychol.*, 1937, 50, 193-195.—An experiment is reported in support of the hypothesis that in any given speech situation one of the factors that determines the frequency of stuttering spasms is the felt or expected penalty that attaches to the stuttering spasm.—E. Heidebreder (Wellesley).

4692. Weiss, —. Ein eigenartiger Fall von Selbstmord. (A peculiar case of suicide.) *Krim. Mh.*, 1937, 11, 135-137.—A 15-year-old boy was found hanged by a cord which was tied around the penis, passed up the back and around the neck, and fastened to a hook in the wall.—M. E. Morse (Baltimore).

[See also abstracts 4491, 4495, 4499, 4500, 4530, 4544, 4548, 4557, 4558, 4559, 4591, 4592, 4602, 4619, 4621, 4623, 4627, 4628, 4631, 4632, 4716, 4717, 4735, 4749, 4774, 4780, 4784, 4804, 4830, 4833, 4834, 4835, 4836, 4837, 4839, 4842, 4847, 4849, 4852, 4854, 4861, 4867, 4869, 4878.]

CRIME AND DELINQUENCY

4693. Alexander, F., & Saul, L. J. Three criminal types as seen by the psychoanalyst. *Psychoanal. Rev.*, 1937, 24, 113-130.—Originally three cases were described at a meeting of the Chicago Academy of Criminology. Only two are published here. The first case is a study of a double murder committed by a 19-year-old boy who killed his brother and a playmate. The mechanisms were somewhat complicated, but the brother had always been a challenge to the boy, particularly since he was more closely attached to the mother and since, too, he was better able to make an adjustment with girls. The boy friend who was murdered was a challenge to the murderer because he had gradually alienated the brother from him, increasing his feelings of inferiority. The character of the murderer basically rested upon his struggle between masculine demand and his passive infantile need for dependence. The second case was one of a sexual offender who was referred to one of the authors for analysis. He was found to be a combination of hardness and softness. The core was soft; the external veneer was extremely hard and tough. He was found to be very difficult to analyze, but it was found that he was attempting to be masculine to cover infantile fixations which rested in the soft core. The analysis was not successful.—L. S. Selling (Recorder's Court, Detroit).

4694. Appel, K. Asoziale Kranke und Sicherheitspolizei. (Asocial patients and the security police.) *Krim. Mh.*, 1937, 11, 130-133.—Asocial patients are those whose diseases, combined with personal attitudes, threaten public safety. They are analogous to habitual criminals, and should be isolated. In the absence of specific laws applying to such patients, the national-socialistic principle of law as a means for protecting the people must be the guide. This applies also to every kind of activity

which menaces the state. All such persons—infectious patients, malingerers, parasites, members of religious bodies, all who criticize the new order—can be reached and punished through the statute against communism, because their activities contribute directly, indirectly, or even unconsciously to the advancement of communism, which is the ultimate source of danger to the state.—M. E. Morse (Baltimore).

4695. Buda, G. E. Über das Vorhandensein beziehungsweise Fehlen von sogenannten Entartungszeichen bei 72 Verwahrungsgefangenen. (On the problem of the existence, or more particularly the non-existence, of so-called signs of degeneration in 72 custodial prisoners.) Bruges: Impr. Sainte Catherine, 1937. Pp. 51.—R. R. Willoughby (Brown).

4696. Codeceira, A. Neurastenia e capacidade penal. Paracer medico-legal psiquiatrico. (Neurasthenia and criminal propensity. Clinical analysis.) *Arch. Assist. Psicopat. Pernambuco*, 1936, 6, 92-98.—The case history shows a relation of criminal tendency to neurasthenia.—R. M. Bellows (U. S. Employment Service).

4697. Durea, M. A. Personality characteristics of juvenile delinquents. I. A method for the selection of differentiating traits. *Child Develpm.*, 1937, 8, 115-128.—A method of statistical analysis is "proposed by means of which items from the Pressey Interest-Attitude tests may be selected that are differential for delinquent as compared with non-delinquent subjects." This method applied to the scores of 316 boys, aged 14 to 18 years, from an institution for juvenile delinquents would indicate the following: (1) "Of things considered wrong, undesirable social traits, such as *being conceited* and *being a snob* are of negative concern to juvenile delinquents." (2) "A pronounced morbid strain seems to characterize delinquents, as indicated by their positive emphasis on items of worry such as *death*, *dying* and *sins*." (3) "Likes and interests are mostly of a superficial or relatively evanescent nature," such as *movie star*, *tap dancing*, *joy riding*, and *candy*. (4) "Reactions of kinds of people admired suggest the essentially egocentric character of juvenile delinquents. Items such as *handsome*, *husky*, *well dressed*, *wealthy*, *good looking*, and others of a similar sort are positively viewed, while *co-operative* receives negative emphasis."—F. D. McTeer (Wayne University).

4698. Finlayson, A. D. The unconscious motivation of criminal behavior. *Ohio St. med. J.*, 1937, 33, 401-405.—R. R. Willoughby (Brown).

4699. Forel, O. L. Le point de vue médico-psychiatrique dans la repression des délits de mœurs. (The viewpoint of psychiatric medicine in the repression of sexual delinquencies.) *Schweiz. Z. Strafrecht*, 1936, 49, 185-202.—The function of the psychiatric expert is to provide the basis for crime prevention through study of the dynamics of the delinquent's total personality. All acts, including criminal ones, presuppose two groups of factors: the

radiconstant (constitution or mental disease) and the dynamic variable (the interplay of expansive and inhibitory urges), which is the decisive factor in crime and its prevention and treatment. Sexual delinquency is always interwoven with neurotic disturbances, with the cure of which it often disappears. In Zürich psychotherapy has given good results (20% of recurrences in the treated but not punished cases, as compared with 73% in the punished untreated cases). Homosexuality has the most unfavorable prognosis. In sexual delinquencies psychotherapy or security measures, not punishment, are indicated. In incurable cases security measures should be started immediately.—*M. E. Morse* (Baltimore).

4700. Hentig, H. v. *Der Beharrungsverbrecher, seine Erkennung und Behandlung.* (The recidivist: recognition and treatment.) *Schweiz. Z. Strafrecht*, 1936, 49, 203-222.—The author discusses the relationship between mental deficiency and recidivism. These delinquents form a special group whose defect is not immediately demonstrable by medical methods. Only the test of adaptation to life brings out their lack of self-direction. Treatment in the early stages differs from that in the later. The methods of Belgium, England and Denmark in dealing with this group are recommended.—*M. E. Morse* (Baltimore).

4701. Hirsch, N. D. M. *Dynamic causes of juvenile crime.* Cambridge: Sci-Art Publishers, 1937. Pp. 250.—This is a study made in the Wayne County clinic for juvenile delinquency. The first chapter in the book discusses the various causal categories; there is then a review of experimental studies, and from then on the author takes up the study of the causation of delinquency from statistical studies and from case histories illustrating definite points. 604 cases were studied in the analysis of causal factors. The case histories give history, psychiatric examination, dreams, appearance, and all of the other features in each case which were available to the author. The author stresses the significance of the neurotic becoming criminalistic, and urges a very definite approach to the problem of crime.—*L. S. Selling* (Recorder's Court, Detroit).

4702. Kempe, G. T. *Een vergelijkend onderzoek naar de criminaliteit in de gemeente Amsterdam en het arrondissement Utrecht over de jaren 1923-1927.* (A comparative study of criminality in the city of Amsterdam and the county of Utrecht during the years 1923-1927.) *Mensch en Maatsch.*, 1937, 13, 279-293.—This first part of a report concerning criminality in the cities of Amsterdam and Utrecht and the county of Utrecht shows a much greater prevalence of acts of violence in the county and its seat than in the capital. The latter exceeded the others in the number of financial crimes committed by men and women, sex offenses of women, illegitimate births among convicts, illiterates among sex offenders. Other statistics include: the educational, occupational, geographical and religious distributions of criminals in these areas and the prevalence of

habitual alcoholics and repeaters among them.—*H. Beaumont* (Kentucky).

4703. Moore, H. K. *Tests for delinquency.* *J. educ. Sociol.*, 1937, 10, 506-511.—Tests for delinquency developed since 1912 are reviewed. Samples of test questions are given. Underlying assumptions are stated, and methods of determining validity are listed. Bibliography of 32 titles.—*W. McTeer* (Wayne University).

4704. Osgood, W. B., & Trapp, C. E. *A study of four hundred juvenile delinquents (statistical report).* *New Engl. J. Med.*, 1936, No. 215, 623-626.—*R. R. Willoughby* (Brown).

4705. Reckless, W. C. *Juvenile delinquency and behavior patterns.* *J. educ. Sociol.*, 1937, 10, 493-505.—Since it is the rules of the family or of other adult cultures that define misbehavior and delinquency in the child, misconduct may be considered a "function of the patterning forces at work in the social environment of the child." Assuming that "the behavior of the child, regardless of original material, can be patterned so as to reduce or exaggerate misconduct" the author reviews the various influences which affect such patterning. Early home life is considered of utmost importance, though statistics indicate that juvenile court cases increase in number from six to twenty-four years of age. Differentials in delinquency have been demonstrated for sex, race, and urban-rural comparisons. In urban areas it has been shown that 89% of the offenses are committed by two or more juveniles working together. Certain areas in the cities are responsible for more crime than are other more well-ordered areas. Reformatory and correctional schools contribute to the spread of delinquency. Motion pictures have also been shown to be a contributing factor. Impact of American patterns upon immigrant groups is still another factor. Even the revision of legal procedures in homogeneous native groups may contribute to delinquency. Treatment in terms of repatterning rather than in terms of causes is recommended.—*W. McTeer* (Wayne University).

4706. Selling, L. S. *The threshold concept in social psychology with particular reference to crime.* *Scientia, Bologna*, 1937, 61, 344-354.—The classical theories of criminal behavior which attribute criminality to either a single weakness in personality or a general "criminal" trait do not accord with the facts. In any individual, certain traits impel him toward the commission of a crime, and other traits deter him. The author defines the "criminal threshold" as the pattern of interaction of these traits. Methods of rating and depicting these patterns of traits are discussed.—*D. W. Chapman* (Recorder's Court, Detroit).

[See also abstracts 4599, 4639, 4670, 4791, 4831.]

INDUSTRIAL AND PERSONNEL PROBLEMS

4707. Andrew, D. M. *An analysis of the Minnesota vocational test for clerical workers. I.* *J. appl.*

Psychol., 1937, 21, 18-47.—A series of tests was given to 155 women at the Employment Stabilization Research Institute in order to determine "what abilities the Minnesota clerical test is measuring, and what abilities it is independent of when applied to a homogeneous group of clerical workers." Correlational analysis revealed four relatively independent factors, viz., academic, clerical, spatial and dexterity abilities. Reliabilities of the various tests and intercorrelations of 19 abilities are presented. These abilities have a generally low correlation with age, clerical experience, and formal education.—R. S. Schultz (Psychological Corporation).

4708. Andrew, D. M. An analysis of the Minnesota vocational test for clerical workers. II. *J. appl. Psychol.*, 21, 139-172.—Multiple-factor and tetrad analyses are demonstrated as valuable methods in the analysis of abilities in practical vocational testing programs. "This study has shown then that the Minnesota Vocational Test for Clerical Workers is measuring an aptitude which is related positively to the abilities to observe and compare, to discriminate small differences rapidly, to adjust to a new situation, and to give attention to a problem. Although the clerical checking tests are closely related, clerical number checking measures more of a numerical factor and clerical name checking more of a verbal factor. The clerical test has shown itself to be relatively unique with respect to academic, spatial, and dexterity abilities. As the groups become more heterogeneous, however, academic, clerical, and spatial tests become less unique." If there is need for economy of time the academic ability test and the clerical number checking test in combination or the clerical name checking test alone may be used for prediction and guidance purposes.—R. S. Schultz (Psychological Corporation).

4709. Blankenship, A. B., & Taylor, H. R. Psychological effects of changing the form of a trade name. *J. appl. Psychol.*, 1937, 21, 94-101.—Change in type form of trade name has little effect on association with product. The degree of confidence in association is related to familiar form. A change in form has little effect on preference when used in an advertisement.—R. S. Schultz (Psychological Corporation).

4710. Brosius, O. Methode und Auswertung kurzer zum Zweck des Menschenerkennens durchgeführter Aussprachen. (Technique and evaluation of a short interview for the purpose of estimating personality.) *Soldatentum*, 1937, 4, 130-134.—This study presents generalizations concerning the problem of the examination of young army candidates. The examination is carried out in the form of an abbreviated conversation between tester and testee.—P. L. Krieger (Leipzig).

4711. Clarke, W. V. The evaluation of employment tests. *Personnel*, 1937, 13, 133-136.—A battery of tests, including the Otis S-A, a sales-check checking test, a change-making test (scored for both speed and accuracy), a test of manual dexterity, and the Bernreuter scale, was administered

to a group of cashiers (*N* not given). The criteria were ratings by supervisors and productive efficiency as measured by transactions handled per day. The following correlations were obtained: extraversion with production, .57; accuracy in change-making with production, .36; speed in change-making with production, .23; accuracy in change-making with ratings, .06; speed in change-making with ratings, .06; dexterity with production, .31, with ratings, .39; amount of checking with production, -.02, with ratings, .02; production with Otis, .003; ratings with Otis, .25. By weighting the tests via a regression equation the correlation found between predicted and actual production was .59, or about 20% better than chance.—J. H. Taylor (Procter & Gamble Company).

4712. Copeland, H. A. Validating two tests for census enumeration. *J. appl. Psychol.*, 1937, 21, 230-232.—Scores on the Otis self-administering test of mental ability, higher form D, and the Minnesota clerical test were correlated with efficiency and performance ratings for a group of supervisors, clerks and enumerators. Although the coefficients of correlation range between .01 and .28, some information is obtained by the use of tests, which aid in selecting more good and eliminating more poor employees.—R. S. Schultz (Psychological Corporation).

4713. Davidson, C. M. Evaluation of clerical tests. *Person. J.*, 1937, 16, 57-64.—Six tests were tried out by a committee on life insurance company employees to see which were best in selecting people who would do their job well and be promotable. The tests used were: Bureau Test VI, Thurstone clerical test, a modified Thurstone, Minnesota vocational test for clerical workers, O'Rourke clerical aptitude (junior grade), and O'Rourke senior grade. The junior O'Rourke was unsatisfactory for this group because it failed to give an adequate distribution of scores. The O'Rourke senior gave unsatisfactory correlations with supervisor's ratings. The only other purely clerical test, the Minnesota, correlated poorly with promotions. It was concluded, therefore, that the mental alertness tests, including the Thurstone clerical test (in spite of its name) were more satisfactory in selecting successful clerical workers for life insurance offices than the clerical tests.—M. B. Mitchell (Bellevue Hospital).

4714. Egozov, P. [The effect of flights of long duration on the pilots' organism.] *Fiziol. Zh. U.S.S.R.*, 1935, 18, 1229-1235.—A study of a pilot and his assistant during an 8-day flight. Respiratory changes were noted during the early days, perhaps due to excitement. Weight, temperature, pulse and blood pressure showed no changes.—H. E. Burt (Ohio State).

4715. Eliasberg, W. Bemerkungen zur Psychopathologie und Psychotherapie der abhängigen Arbeit. (Some remarks concerning the psychopathology and psychotherapy of wage labor.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 525-532.—The shift from agricultural to industrial occupations

has brought with it certain basic changes in the characteristics of the labor situation: (1) The capacity to consume has become smaller in relation to wages received. (2) Functional and creative pleasure in work is largely eliminated. (3) There is an increased need of security of (a) the ability to work, (b) a place to work, (c) an income, even when unemployed. (4) Dependence is felt as a burden because of (a) separation from the means of production, (b) subordination to the will of the employer. (5) In many cases, promotion is lacking. (6) Collective agreements intensify class distinctions. (7) A desire for economic democracy to parallel political democracy develops. (8) The worker wants a proprietary interest in the business. Social reforms must remain partly ineffective because no two individual workers are "allergic" to the same problem situations listed above.—*H. Beaumont* (Kentucky).

4716. Fanta, O. *Die Anwendung der Graphologie in der Angestelltenauslese*. (The use of graphology in the selection of personnel.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 689-694.—Like the psychotechnician, the applied graphologist examines the applicant's intellectual and volitional capacities in their quantitative and qualitative aspects, as well as the special capacities needed for the job. These special qualifications must be worked out by the psychotechnician, while their presence in the applicant may be detected by the graphologist. It is urged that these two types of workers collaborate closely for more adequate selection of personnel.—*H. Beaumont* (Kentucky).

4717. Feuerstein, W., & Schönfeld, W. *Ein Beitrag zur Charakterologie der medizinischen Fachgruppen, insbesondere der Internisten*. (A contribution to the characterology of medical practitioners, especially internists.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 611-627.—On the basis of graphological studies, general characteristics of physicians cannot be determined; but it appears that within this larger group specialization depends more on aptitude and interest than does the original decision to study medicine. It is possible to speak of the dermatologist's handwriting and character as well as of the surgeon's, etc. The internist's handwriting shows the ability to conceive combinations and to abstract; the surgeon's, impulsiveness, quick decision and certainty of action; the dermatologist's and roentgenologist's, sensory impressiveness and imagination, etc. This close relationship between handwriting and specialization should provide a valuable and practical aid in vocational guidance of medical students.—*H. Beaumont* (Kentucky).

4718. Forster, N. K. *Mental attitudes—their relationship to industrial accidents*. *Industr. Med.*, 1937, 6, 193-195.—*R. R. Willoughby* (Brown).

4719. Gatti, A. *La disoccupazione come crisi psicologica*. (Unemployment as a psychological crisis.) *Arch. ital. Psicol.*, 1937, 15, 4-28.—The author reviews the literature on the human factor

in unemployment, and points out that the psychological aspects of the problem have received comparatively little attention. In this connection the nature of the unemployed population is important; in Italy, where unemployment has been less extensive than elsewhere, and where many workers have alternate periods of employment and idleness, the author distinguishes three psychological types among the unemployed: the apathetic, the unresigned, and the anxious. Each represents a resolution of the tension resulting from economic stress and inactivity. A bibliography of 33 titles is included.—*C. J. Herrick* (Pennsylvania).

4720. Gatti, A. *La personalità individuale e le attitudini al lavoro*. (The individual personality and attitudes toward work.) *Arch. ital. Psicol.*, 1937, 15, 86-88.—The author considers briefly the attitudes of workers to such factors as: indoor work; size of establishment; proximity to other industries; automatic machinery; rhythm; noise; piece or time wages; assumption of responsibility; and working alone, with others, or on a production line. Appraisal of these attitudes in adults is difficult; in the industrial schools, where longer observation is possible, it is easier. Research is being undertaken at Turin to establish the psychological characteristics adapted to various working conditions.—*C. J. Herrick* (Pennsylvania).

4721. Golzio, S. *Un'indagine statistica sulla composizione di un gruppo di disoccupati*. (A statistical investigation of the make-up of a group of unemployed.) *Arch. ital. Psicol.*, 1937, 15, 53-69.—A statistical study of some 1200 male and 400 female unemployed at Turin, covering such items as age, duration of unemployment, birthplace, trade, education, marital status, and number of dependents, shows that age is the most important factor determining the composition of the group. Marked sex differences were found, referable to social conditions underlying the employment of women. In most respects the unemployed groups were representative of the laboring population as a whole.—*C. J. Herrick* (Pennsylvania).

4722. Hlaváč, O. A. *A contribution to the psycho-technical analysis of a physician and stomatologist*. *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 628-639.—Dental medicine in Czechoslovakia may be practiced only by physicians who have specialized after obtaining their degree in general medicine. Thus freshmen should be tested for their aptitude for general medicine, and again in their senior year in medical school for special aptitude for stomatology. Some of these special characteristics are listed under three headings: physical, mental and technical, and character.—*H. Beaumont* (Kentucky).

4723. Hoppock, R. *Job satisfaction of psychologists*. *J. appl. Psychol.*, 1937, 21, 300-303.—A job satisfaction blank mailed to 203 names listed with interest in vocational or industrial psychology in the American Psychological Association directory was answered by 66 persons. The average of self estimates on job satisfaction ranks "at the 64th

percentile of the employed adult population, which is almost exactly the level of the professional, managerial, and executive class."—R. S. Schultz (Psychological Corporation).

4724. Johnson, LeV., & Lauer, A. R. A study of the effect of induced manual handicaps on automotive performance in relation to reaction time. *J. appl. Psychol.*, 1937, 21, 85-93.—Measures of manipulative ability on a standardized indoor driving test and reaction time were obtained by performance with left and right hands separately and with both hands. Very slight differences were found under each of these conditions in manipulative ability. Time is increased about 8% when one hand is used in comparison with both hands. Correlations between reaction time and manipulative ability were insignificant. Subjects with quick reaction time were more affected by restricting one arm than those with slow reaction time.—R. S. Schultz (Psychological Corporation).

4725. Kraus, L. Die Eignung für die juristischen Berufe: Richter, Verwaltungsbeamter, Advokat. (Aptitude for the legal professions: judge, prosecutor, lawyer.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 436-441.—Though their points of emphasis differ, the methods whereby judge, prosecutor and lawyer proceed are fundamentally the same: (1) determining the facts in the case; (2) summarizing the legally relevant points; (3) selecting the laws and legal decisions which apply to the case. A questionnaire was submitted to selected members of each profession which included questions relating to the reasons for their choice of occupation, the qualifications required in the legal professions, and the importance of physical characteristics and of a critical attitude toward the law.—H. Beaumont (Kentucky).

4726. Laird, D. A. The psychology of selecting employees. (3rd ed.) New York: McGraw-Hill, 1937. Pp. xiii + 316. \$4.00.—"This book, which in the first and second editions bore the title *Psychology of Selecting Men*, incorporates numerous minor changes to bring the text up to date. Two chapters have been dropped and two entirely new chapters have been added. The alterations have been chiefly to make the book more useful to the employment manager and interviewer and probably less useful to the professional psychologist." In 18 chapters the various methods of selecting employees are described, illustrated, and evaluated in considerable detail.—H. Schlosberg (Brown).

4727. Lanina, W., & Michajlowsky, W. [Study of the control of motor impulses by means of Rupp's apparatus.] *Sovetsk. Psikhotekh.*, 1935, 4, 352-373.—The subject manipulates a lever at an auditory stimulus, and also estimates a number of lights that flash intermittently. The test was given to automobile drivers. Correlations with service records were negligible for reactions to the lights. Various aspects of reactions with the lever showed some correlation, the maximum being .39.—H. E. Burt (Ohio State).

4728. Lauer, A. R. Fact and fancy regarding driver testing procedures. *J. appl. Psychol.*, 1937, 21, 173-184.—This paper is a general discussion; it reviews previous studies and assumptions, analyzes facts relating to accident frequency, and offers suggestions for further research and development in techniques for studying driving ability and related problems. "Ability-capacity" constellations will probably be discovered to be most useful in studying accident proneness.—R. S. Schultz (Psychological Corporation).

4729. Laugier, H., Kowarski, D., & Weinberg, D. Un essai de sélection psychophysiologique d'ouvriers soudeurs. Méthode et premiers résultats pratiques. (Psychophysiological selection of welders. Method and preliminary practical results.) *Travail hum.*, 1937, 5, 182-211.—The criterion consisted of ratings by supervisors in a school for apprentices, early and late records being weighted differently. The battery included medical, muscular, visual and intellectual tests. The results were reduced to standard scores and profiles plotted for good vs. poor welders. The most differential measurements were identifying colors, resistance to glare, lung capacity, visual reaction time, stereoscopic vision, and manual steadiness. A critical score in each of the best tests is determined in terms of standard deviation.—H. E. Burt (Ohio State).

4730. Link, H. C. How many interviews are necessary for results of a certain accuracy. *J. appl. Psychol.*, 1937, 21, 1-17.—An outline of methods and tables is presented on market research questionnaire studies of the Psychological Corporation, for determining accuracy of results and discovering the number of interviews desirable for a result of a certain accuracy.—R. S. Schultz (Psychological Corporation).

4731. Lubrich, W. Die wesentlichsten psychologischen Gesichtspunkte der Spezialistenauslese. (Essential psychological points in choosing specialists in the army.) *Soldatentum*, 1937, 4, 3ff.—Choosing specialists in the army is done in the interest of all, in order, by quicker means, to reach the highest possible degree of efficiency, to avoid tedious trial and error, and, through consciousness of one's own ability to enhance the pleasure of service and responsibility. Particular physical and military abilities of known reliability are requisite. The vocation learned in civil life offers the investigator a starting point, but does not warrant a final decision in the absence of further capacities of a personally specific nature. For example, mental alertness and the knack of swiftly grasping school work, reports, etc., must be distinguished. Marked ability, range and fidelity of memory, the entire art of thinking (logical versus desultory organization), are incorporated in the psychological performance test. The normal functioning of the sense organs still offers no exclusive criterion for the existence of specific talents in the sphere of the perceptive faculties. These are thus specially determined, particularly for listening-posts (*Dienst des Horchers*),

range-finders and radiotelegraphers.—P. L. Krieger (Leipzig).

4732. McKinney, F. An empirical method of analyzing a sales interview. *J. appl. Psychol.*, 1937, 21, 280-299.—Ratings and qualitative subjective reactions were obtained from students to specific elements in class demonstration of standardized sales interviews and radio sales talks. Reliability, practical possibilities, and further development of this method are considered.—R. S. Schultz (Psychological Corporation).

4733. Mysliveček, Z. Influence de l'état somatique sur la psychopathologie du travail. (The influence of somatic condition on the psychopathology of work.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 558-565.—Somatic conditions, including those affecting the endocrine, vegetative and nervous systems, have a considerable influence on the worker's aptitude for his job. Age factors should be carefully considered, especially insofar as they represent personality changes in the average person, in the interpretation of aptitude test scores. A better understanding can be gained when different somatic constitutions have been studied from the psychotechnical point of view.—H. Beaumont (Kentucky).

4734. Neweklufová, T. Zur Psychologie und Psychotechnik des Ärztberufes. (The psychology and psychotechnics of the medical profession.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 453-460.—It appears desirable to develop a technique whereby aptitude for the medical profession may be determined in the first year in medical school. This should include, in addition to an aptitude test proper, observations of general behavior and personality and a test of social attitudes, all of which have been found to be essential factors in determining success in this profession. The question remains whether such aptitude must be present at the very outset of one's professional preparation or may be expected to develop in the course of a (possibly revised) curriculum.—H. Beaumont (Kentucky).

4735. Reynolds, B. C. The development of a professional self. *Family*, 1937, 18, 61-66.—The unique skill of social case work lies in the professional use of a relationship for the solving of problems of life adjustment.—M. Keller (Brown).

4736. Ripin, R., & Lazarsfeld, P. F. The tactile-kinaesthetic perception of fabrics with emphasis on their relative pleasantness. *J. appl. Psychol.*, 1937, 21, 198-224.—In a paired-comparison arrangement a series of rayons and silks was presented to 100 blindfolded women. "There is no specificity of judgment, either tactile or hedonic, with respect to any one attribute; all judgments are influenced by the configuration which goes to make up the fabric and any cognitive factor which may be connected with it through experience." "There is clear indication for two types of pleasantness in tactile experiences, which we have termed the *relaxing* and the *demanding*." "The reliability of the judgments for the whole group of O's tested repeatedly is high."

"Applying a statistical test upon the distribution of comments, they turn out not to follow a chance distribution. One has to assume, therefore, that the probability of choices is different for different groups of O's. There seem to be personal tendencies in the field of tactile preferences, but nothing can be said so far on their nature or origin."—R. S. Schultz (Psychological Corporation).

4737. Royer, E. B. How many observations are necessary in setting wage incentive standards? *Personnel*, 1937, 13, 137-139.—The author has adapted a common formula to aid the time-study engineer in determining whether he has made enough observations to satisfy the established criterion of accuracy, and, if this limited area is not attained, to determine how many additional observations must be made. The possible error of the mean of the given readings is computed by the formula

$$E = \frac{3}{\sqrt{N}} \sqrt{\frac{N\sum X^2 - (\sum X)^2}{N(N-1)}}$$

If the possible error is greater than the permissible error (the criterion limits) then the question arises how many additional observations are required to keep the possible error within limits. This is found by solving the formula for N .—J. H. Taylor (Proctor & Gamble Company).

4738. Sacerdote, A. La disoccupazione quale causa di minorazione. (Unemployment as a cause of disability.) *Arch. ital. Psicol.*, 1937, 15, 29-52.—The physiology and pathology of the unemployed worker are considered in an effort to explain his loss of capacity for work. The most important factor is nutritional, involving a diminution of both muscular and psychic energy. Other factors include lack of practice in the job, psychic depression, greater susceptibility to certain diseases, increased use of alcohol, and the greater play which unemployment gives to immoral or antisocial tendencies which may be present.—C. J. Herrick (Pennsylvania).

4739. Samek, J. Die Psychotechnik des Dermatologen. (The psychotechnics of the dermatologist.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 653-657. The author lists a number of characteristics which distinguish the dermatologist from the general practitioner.—H. Beaumont (Kentucky).

4740. Schmidt, J. Arbeitsschulung in der industriellen Praxis. (Work training in industrial practice.) *Industr. Psychotech.*, 1936, 13, 233-242.—R. R. Willoughby (Brown).

4741. Simoneit, —. Psychologische Offiziersanwärter-Eignungsprüfung. (Examination for psychological qualifications of candidates for officers' rank.) *Umschau*, 1937, 41, 13.—In addition to psychotechnical tests, the candidates are subjected to an examination of their total personality, lasting two days and conducted by two officers, an officer of the sanitary service, and two psychologists and their assistant. This comprises the life history, mental attitude and capacity for action. The results are embodied in a judgment which does not have

decisive weight but is a recommendation to the army authorities.—J. Deussen (Freiburg).

4742. Simonson, E. *Physiologische Grundlagen der Pausenregelung*. (Physiological foundations of the regulation of rest periods.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 566-572.—The greatest recuperative value of a rest period was found to occur during the first few minutes. Measurements of different physiological processes (breathing, pulse rate, etc.) showed that in certain foundries a ten-minute period sufficed, but that in those where the humidity was higher longer periods were necessary. Short rest periods (1 or 2 minutes) are valuable only to regulate the oxygen consumption. Too long rest periods are detrimental because they interfere with the physiological adaptation to the labor process. In more detailed work, involving delicate motor coordination, rest periods of over 5 minutes were found to be detrimental to efficiency. It appears that the adjustment of the central nervous system can be destroyed more easily than that of the muscular system. Less is known about the best manner of spending a rest period. The author found that showers were very beneficial to those working in high temperatures and that a sitting position was preferable to a standing one during rest. This emphasizes the need for a complete change of activity during the period of rest.—H. Beaumont (Kentucky).

4743. Sumržová, A. *Über die Auswahl der Kandidatinnen für die Pflegerinnenschule auf Grund der Intelligenzprüfungen*. (The selection of student nurses on the basis of intelligence tests.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 374-378.—A correlation of $.72 \pm .07$ was found to exist between the IQ and examination grades of student nurses in Prague who had been admitted without intelligence tests. The IQ range was from 70 to 136, with a mean of 99 and a sigma of 14.3. With one exception, all those having IQ's below 95 failed the examinations; the average IQ of those who failed was 86.6, of those who passed 102. On the basis of these findings intelligence tests were incorporated into the admission procedure. As a result the mean IQ of those who failed was 97.6, of those who passed 101.1, and the coefficient of correlation between IQ and grades was $.59 \pm .09$. This correlation is, of course, lower because selection has eliminated the cases with low IQ's.—H. Beaumont (Kentucky).

4744. Symonds, P. M. *Problems falling within the scope of psychological counseling*. *J. appl. Psychol.*, 1937, 21, 66-74.—A survey of publications reveals types of problems coming to the psychological counselor. Desirable standards in training and experience are suggested for rendering certain types of psychological counseling and service. An 8-step scale of mental and behavior disorders is proposed that may serve as a guide for determining what types of cases psychologists can undertake, and describes the perfectly adjusted individual, average man, mild personality peculiarities, adjustable problems, neurosis, pre-psychosis, psychosis, deep

psychosis, or organic lesions.—R. S. Schultz (Psychological Corporation).

4745. Toops, H. A. *The factor of mechanical arrangement and typography in questionnaires*. *J. appl. Psychol.*, 1937, 21, 225-229.—The study discusses some general principles and various steps in developing the best arrangement and typography for a special personnel questionnaire.—R. S. Schultz (Psychological Corporation).

4746. Toops, H. A., & Haven, S. E. *Viewing the traffic problem*. *J. appl. Psychol.*, 1937, 21, 185-197.—Various types of published information and records on the traffic problem were examined and personal interviews were conducted in order to evaluate common misconceptions and essential facts concerning the traffic problem. A need is indicated for cooperative effort of many professions, definitions of terms, statistical methods, and a scientific point of view.—R. S. Schultz (Psychological Corporation).

4747. Venturoli, A. [The Bedaux system.] *Riv. ital. Sci. Econ.*, 1935, 7, 218-230.—The author analyzes the Bedaux system for the organization of work in industry and compares it with Taylor's and Ford's systems. He observes that this system, after a notable diffusion in Italian industry, is today rapidly disappearing, being itself unfit and inadequate.—L. Canestrelli (Rome).

4748. Výborný, F. *Der Eintritt ins Leben auf dem Lande (Zusammenfassung)*. (Entering practical life in rural districts; summary.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 802.—H. Beaumont (Kentucky).

[See also abstracts 4437, 4526, 4591, 4593, 4598, 4753, 4766, 4784, 4802, 4823.]

EDUCATIONAL PSYCHOLOGY

(incl. Vocational Guidance)

4749. Ascher, M. K. *A comparison of educational and national ideals in Germany and the United States*. *Sch. Rev.*, 1937, 45, 368-380.—"The American way of life is primarily the product of mass enlightenment; the German *Weltanschauung* is the product of the constant subjugation of the masses to the will of an autocratic, militaristic dictatorship. Thus the German and the American national ideals are, and always have been, diametrically opposite in character, imbedded as they are in the history of their particular civilizations." Bibliography of 18 titles.—M. E. Wagner (Buffalo).

4750. Bagley, D. *A critical survey of objective estimates in the teaching of English. II*. *Brit. J. educ. Psychol.*, 1937, 7, 138-155.—Studies of spelling, formal and applied grammar, written composition, and the rating of compositions are reviewed in relation to their significance for the teaching of English. Achievement in English work is chiefly dependent on verbal ability, with great stress laid on need for training and experience and heavy demands on intelligence. The principles of learning call for grasp of whole concepts followed by analysis

into parts; for rules of general application; for repetition in early years with increased rationalization from age eleven up; for continual organization, grading and testing of achievement.—K. M. Cowdery (Stanford).

4751. Baumgarten, F., & Zürcher, W. *Über die Berufsneigung der Schüler schweizerischer Lehrerseminarien.* (Vocational interests of students in Swiss normal schools.) *C. R. 8 Conf. int. Psychotech., Prague, 1935*, 393-399.—Questionnaires were sent to all Swiss normal schools and returned by 443 men and 270 women between the ages of 14 and 22. 15.74% of the boys who responded and 31.63% of the girls stated that the decision to become a teacher had been reached in childhood. This choice had been made under the influence of others in 38.5% of the cases and in 34.55% because of interest in teaching. Special ability was mentioned by 5.2%. The most generally liked feature of teaching was "functional pleasure" (boys 36.75%, girls 34.9%), the most generally disliked was "politics in the selection of teachers" (boys 18.8%, girls 1.15%). Their aims in life were listed as follows: to be good teachers (boys 26.8%, girls 20.4%); satisfaction (boys 12.4%, girls 5.63%); to bring about needed reforms (boys 1.16%, girls 0.34%); to perform social tasks (boys 10.5%, girls 24%); prestige (boys 8.9%, girls 1.4%); financial security (boys 13.4%, girls 3.1%); to establish a family (boys 6.6%, girls 8.27%); to develop personality (boys 16.1%, girls 23.7%).—H. Beaumont (Kentucky).

4752. Bergmann, T. *Versuch der Behebung einer Erziehungsschwierigkeit.* (An attempt at correcting a learning difficulty.) *Z. psychoanal. Pädag., 1937*, 11, 29-43.—A 10-year-old girl had difficulty in learning and was considerably behind in her school work. The author succeeded in bringing to bear external influences by building up the child's failing self-confidence and improving the environmental influences to some extent, while at the same time providing an internal drive by showing her how to escape from problem situations into which her emotional behavior had led her. The results were doubly favorable, because the girl was taught to overcome her learning difficulty and shown the way to improve her adjustment to reality.—H. Beaumont (Kentucky).

4753. Besch, E. M. *Occupations of graduates of a small high school.* *Sch. Rev., 1937*, 45, 447-451.—250 graduates of a small high school were followed. 79% returned questionnaires. These were employed in occupational classifications definitely higher than that of the United States as a whole and higher than those of their parents.—M. E. Wagner (Buffalo).

4754. Biegeleisen, B. *L'orientation professionnelle des bacheliers au point de vue méthodique.* (The vocational orientation of high school graduates from the methodological point of view.) *C. R. 8 Conf. int. Psychotech., Prague, 1935*, 399-410.—The author emphasizes the need of college personnel work along the lines suggested by the American

College Personnel Association, to include: (1) analyzing the professions open to college-trained men and women; (2) understanding the adolescent mentality; (3) directing the adolescent toward the most suitable vocation; (4) verifying the results of this advice; (5) organizing orientation in a manner best adapted to psychological and social requirements.—H. Beaumont (Kentucky).

4755. Bird, C., & Andrew, D. M. *The comparative validity of new-type questions.* *J. educ. Psychol., 1937*, 28, 241-258.—The study reports an item analysis of 2263 questions on introductory psychology in order to reveal the comparative validity of single-choice, analogy, wrong-word answer, and single-word completion questions. The single-word completion question was found to be the most valid, i.e., the best for discriminating good from poor students. There are no great differences among the validities of analogy, wrong-word answer, and single-choice questions, although they may be ranked from most to least valid in the order named.—A. W. Melton (Missouri).

4756. Bowers, V. W. *Case studies as an aid to the primary grade teacher.* *Smith Coll. Stud. Soc. Work, 1937*, 7, 277-301.—Study of a pre-primary group of 27 children who were poorly adjusted in school and school work. A large proportion lived under adverse conditions in the home with which the teacher should be familiar. The writer concludes that schools need information about attitudes, habits of reaction, and home conditions of each child when he enters school.—R. H. Brown (Clark).

4757. Chapman, P. W. *Occupational guidance.* Atlanta, Ga.: Turner E. Smith & Co., 1937. Pp. 646. \$1.76.—R. R. Willoughby (Brown).

4758. Csehily, Š. *Examens psychotechniques dans les écoles et dans les bureaux d'orientation professionnelle de la Russie Subcarpathique (résumé).* (Psychotechnical examinations in the schools and vocational orientation bureaus of Subcarpathian Russia; summary.) *C. R. 8 Conf. int. Psychotech., Prague, 1935*, 741.—H. Beaumont (Kentucky).

4759. Cuff, N. B. *Study habits in grades four to twelve.* *J. educ. Psychol., 1937*, 28, 295-301.—A tabular summary of the principles of efficient study listed by other writers revealed only six principles that received mention by more than 50% of the writers, and these were chiefly concerned with the problems of study at the college level. In an effort to get principles appropriate to the elementary and secondary levels, children in these groups were given a study questionnaire. Specific findings relative to the study habits of bright and dull children and of older and younger children are presented.—A. W. Melton (Missouri).

4760. Curtis, F. D. *Specific suggestions for teaching dull-normal pupils.* *Sch. Rev., 1936*, 44, 525-532.—24 such suggestions are discussed.—M. E. Wagner (Buffalo).

4761. Disman, M. *Mesure des capacités mathématiques des élèves a l'issue de leur 5ème année*

scolaire (résumé). (The measurement of mathematical capacities of children at the end of their fifth school year; summary.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 742-743.—H. Beaumont (Kentucky).

4762. Disman, M., & Trajer, J. *Problème du diagnostic mathématique et perfectionnement économique sur une base scientifique (résumé)*. (The problem of mathematical diagnosis and economical improvement on a scientific basis; summary.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 744.—H. Beaumont (Kentucky).

4763. Doležal, J. *Ein Beitrag zum Problem der Auslese für das höhere Studium*. (A contribution to the problem of selection for advanced studies.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 410-429.—High schools should attempt to select good college material through an analysis of the individual's psychophysical constitution. The author discusses ways of adapting a number of tests to be used for this purpose. A battery consisting of the Dunajevsky test, an analogy test, and tests of mathematical problems and proverbs was given to a number of students. Coefficients of correlation of each test with scholastic achievement were computed. In addition, intercorrelations and correlations with intelligence were computed. The entire series of tests had a validity of .88 and is considered a useful means of determining intelligence.—H. Beaumont (Kentucky).

4764. Freeman, F. N., & Buswell, G. T. *Selected references on educational psychology*. *Sch. Rev.*, 1937, 45, 381-386.—Presents 4 annotated references on general and theoretical discussions, 9 on mental growth and child psychology, 1 on individual differences, 7 on learning, 8 on mental measurement and rating, and 10 on personality and adjustment.—M. E. Wagner (Buffalo).

4765. Friedman, K. C., & Jacobson, P. B. *A statistical basis for educational guidance*. *Sch. Rev.*, 1937, 45, 318-363.—Results indicate that pupils who fail in English, mathematics, or social studies will probably drop out of school or graduate in the lowest fourth of their class, with a slight possibility of finishing in the third fourth. By arranging required courses in English, mathematics and social studies on three levels of difficulty, by making serious attempts to individualize the instruction, and by guiding slow pupils into courses in which they can succeed, the school should be able to retain these pupils. They may eventually be graduated and be furnished courses in the junior college in which they can again succeed. Pupils in the lowest half of the class in high school should be guided away from the traditional college-preparatory pattern of subjects, in which they are most unlikely to succeed, and into terminal courses profitable to them.—M. E. Wagner (Buffalo).

4766. Hänsgen, E. *Gedanken über betriebsnahe Schulung*. (Reflections on vocationally useful training.) *Industr. Psychotech.*, 1936, 13, 225-232.—R. R. Willoughby (Brown).

4767. Harter, R. S. *The effects of training upon the belief in certain popular misconceptions*. *J. appl. Psychol.*, 1937, 21, 119-129.—A questionnaire on popular misconceptions submitted to students at the beginning and the end of a semester in psychology revealed no significant sex differences. Correlations of misconception scores with intelligence and class grades were low ($-.20$ to $-.23$). The reduction in credulity was especially noticeable for some statements for which correct scientific information had been provided during the course in psychology.—R. S. Schultz (Psychological Corporation).

4768. Hořejši, J. *The psychological aspect of the so-called practical exercises in secondary schools*. *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 747-749.—The results of laboratory exercises in secondary schools depend in part on psychological factors, such as: a longing for activity, curiosity, an attempt to escape from theory, a desire to see an expert at work, and many others. These exercises may, after a while, fail to interest pupils. External causes may be responsible (insufficient and poor equipment, etc.) or any one of the following psychological reasons may account for this failure: youthful indifference, disappointed expectations, helplessness before a problem, dislike of regular work or of activity in general, unwillingness to subject oneself to routine or to supplement practical work by theoretical studies.—H. Beaumont (Kentucky).

4769. Hughes, A. G., & Hughes, E. H. *Learning and teaching*. New York: Longmans, Green, 1937. Pp. ix + 450. \$2.50.—Written chiefly for British readers, this book deals with the problems common to introductory approaches to the relation and application of psychology to education. Its aim is to furnish a simple, comprehensive textbook for students who are preparing for certificate examinations in the English training schools, and to keep teachers in service in touch with modern developments in educational thought. Emphasis is placed on the essential correlative functions of learning and teaching in the educative process. The authors claim interest in the children and teachers involved rather than in theoretical psychological abstractions. Suggestions for observations and experiments, presupposing some laboratory-school relationships, are given at the end of each chapter, in addition to references and subjects for essays and discussions. The 23 chapters include discussion of such topics as the natural endowment of children, preschool learning, the development of habits, intellect, character, muscular skills, taste, sociability, and personality, fatigue, difficult children, the art of teaching, and many others. Footnote references and bibliography comprise principally works of British authors.—D. Bailey (Mount Holyoke).

4770. Hutson, P. W. *Selected references on guidance*. *Sch. Rev.*, 1936, 44, 539-546.—Annotations of 43 references are given.—M. E. Wagner (Buffalo).

4771. Ingram, C. P. *Education for the visually handicapped*. *Sight-Sav. Rev.*, 1936, 6, 212-218.—

The program conducted in the Rochester, New York, schools is described. Children who may be considered eligible for instruction in a sight-saving class include those who cannot read more than 20/70 in the better eye with correction, those with progressive myopia even with correction up to nearly normal, those who in the opinion of the ophthalmologist would benefit subject to the acceptance of the educational authorities. . . . The number of children in need of this service is estimated at .2% of the school population. . . . The goals set in this work are: (1) to provide care for all the eligible children in the community; (2) to assist the grade teacher in adjusting the borderline case; (3) to develop a better knowledge of the place these children may have in industry and to plan with the family and the Rehabilitation Bureau for the individual pupil when he leaves school; (4) to encourage contact with normal group activities; (5) to encourage eye hygiene and preventive measures.—(Courtesy *Child Developm. Abstr.*)

4772. Ivanov, A. *Erfahrungen aus der psychologischen Diagnostik der Schüler.* (Experiences with the psychological diagnosis of school children.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 751-759.*—Abilities cannot be measured directly by experimental means, but an accurate picture can be gained by analyzing achievement. This is especially important when it is desired to determine the qualitative aspects of intelligence. Environmental conditions should be carefully considered before the child's development can be understood. Cases presenting personality and scholastic difficulties are particularly useful in promoting an understanding of the child's characteristics. Through careful diagnosis it is now possible to prevent most of the more serious mistakes which used to be made in child training.—*H. Beaumont (Kentucky).*

4773. Kirkendall, L. A. *Factors related to the changes in school adjustment of high school pupils.* *Teach. Coll. Contrib. Educ., 1937, No. 705. Pp. viii + 90.*—Changes in adjustment to school were determined by the differences of scores on the Symonds adjustment questionnaire, which was administered twice with a year interval, and by changes in the "teacher designations." Changes in the home environment were determined by differences on the Myers intra-family questionnaire. No relationship was found between changes in school adjustment and changes in home environment. "Many factors [are] involved in any change in pupil adjustment." "Age bears a relationship to changes in adjustment." "The adjustment of over-age pupils is a more acute school problem than the adjustment of under-age pupils." The bibliography lists 34 titles.—*J. M. Stalnaker (Princeton).*

4774. Konvička, V. *Les différences individuelles et le dessin à l'école primaire supérieure.* (Individual differences and the teaching of drawing in the higher grades.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 759-760.*—*H. Beaumont (Kentucky).*

4775. Koubek, L. *Soziologische und psychologische Untersuchungen an Bürgerschulen.* (Sociological and psychological studies in the continuation school.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 760-768.*—In Czechoslovakia the continuation school is attended primarily by pupils who cannot afford to go to a high school. Its student body embraces 36.4% of all children between the ages of 11 and 14, compared with 5.3% who go to high school. Almost 50% of these children come from the very poorest homes, 21.4% have lost their fathers or both parents; 80% complain of serious illness, and 62.6% have lost a brother or sister. Many other data are quoted to show the poor environment of these children, 9.7% of whom failed to pass (compared with 4.2% in high school). As a side-issue their musical preferences were studied. "Hits" were preferred to folk music, but 80% of all the songs which they knew were sad in content.—*H. Beaumont (Kentucky).*

4776. Lahy, J. M. *Un service de psychotechnique scolaire et sociale avec dispensaire psychopédagogique dans une commune rurale.* (A psychotechnical educational and social service with a psychopedagogical dispensary in a rural community.) *Travail hum., 1937, 5, 150-181.*—The development of an experimental school class in a small town near Paris is described. Distributions of scores in various tests show the community to be intellectually inferior to a similar sample in Paris. The difference is attributed to environment, which enables one group earlier to "acquire the ability to use its brain." A file is kept for each child to show improvement in test scores. A dispensary is recommended which will give some attention to character education, consulting with parents, vocational guidance, and advising teachers. An experimental school should have a central position in such a dispensary. Services included are medical, psychotechnical, social and psychopedagogical.—*H. E. Burt (Ohio State).*

4777. Machač, S. *The diagnostic value of pupils' achievements in orthography (summary).* *C. R. 8 Conf. int. Psychotech., Prague, 1935, 772.*—*H. Beaumont (Kentucky).*

4778. Marzi, A. *L'orientation professionnelle dans les écoles industrielles et les services de la ville de Florence.* (Professional orientation in industrial schools and the services of the city of Florence.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 363-366.*—In the psychotechnical bureau of the city of Florence, vocational orientation is offered students who have been enrolled for five years in a school for industrial workers and technicians. These pupils are under constant observation from the day of enrolment. Upon entrance they are given a sensory examination to supplement the medical findings, an intelligence test, a test of attention, and one of technical aptitude; at the end of three years another intelligence test (showing possible changes during puberty) and a psychotechnical examination, including dynamometer, ergograph, tests of precision of movement, grip and motor

rapidity, simple and choice reaction times, perception of form and size, etc. At the end of each school year each instructor fills out a questionnaire concerning each student. In addition, pupils are encouraged to express their vocational objectives each year. On the basis of these data sound advice concerning vocational orientation can be given.—*H. Beaumont* (Kentucky).

4779. Matoušek, O. Cinq ans d'expériences faites avec les tests des étudiants de l'université de Prague. (Five years' experience with testing students in the University of Prague.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 441-446.*—Tests given freshmen in the department of natural sciences of the University of Prague, which have been obligatory for the past four years, include: an anonymous questionnaire, two intelligence tests, different achievement tests (not limited to the sciences), language tests (Czechoslovak and foreign), a cheating test, and physical and anthropological examinations. A high degree of correlation was found to exist between intelligence and achievement and between intelligence and freedom from cheating. These tests are an attempt at understanding the student body, undertaken by the author after having observed student personnel procedures in the United States.—*H. Beaumont* (Kentucky).

4780. Miller, A. J. Is the exceptionally able college student socially maladjusted? *Sch. & Soc., 1937, 45, 862-864.*—The records of 83 exceptionally able graduating students from the University of Pennsylvania, as indicated by rank in the high school class, psychological examination, college quality-point average, and percent graduating with honors, were compared with those of 558 other graduates from the same schools. The average age of the superior group at college entrance was 17 years 2 months, and that of the average group 18 years 7 months. The superior group exceeds the average in membership in extracurricular organizations (75% to 37%), in range of interests, in activity in social, musical, dramatic and especially debating organizations, and in number holding offices (54% to 21%), and equals the average in amount of athletic activity. This indicates that the abler students, although younger, are not less well but better adjusted socially than the average.—*M. Lee* (Chicago).

4781. Morfitt, M. D. K. Comparison of individual-concrete methods and class methods in the teaching of arithmetic. *Brit. J. educ. Psychol., 1937, 7, 196-203.*—Using results from two schools—one with Montessori followed by Dalton methods and classed as "individual concrete," the other with traditional class teaching—the writer finds that the method of tackling the concrete problem of estimating a number of spots on a page changes with increase in mental age, the first step being to count separate spots, the second to add rows, the third to multiply one row by the number of rows. These steps are taken independently of the method of teaching. "Individual-concrete" methods of teach-

ing increase speed without loss of accuracy. In an abstract process (a series of simple multiplications) results have suggested that children trained by the "individual-concrete" methods showed increased accuracy combined with higher speed than those trained by class methods.—*K. M. Cowdery* (Stanford).

4782. Nelson, T. H. Changing concepts of adult education. *J. educ. Sociol., 1937, 10, 515-526.*—"The situation today points to the logic of an extensive and varied adult education program—much of it under public auspices." Whereas adult education has been in the past considered as a means of individual vocational advancement for the student, its present purpose is coming to be that of providing for the student an opportunity "to give expression to those interests and abilities which the rest of life does not permit." "Adult education can no longer be concerned merely with independence—it must help persons develop intelligent and effective interdependence."—*F. D. McTeer* (Wayne University).

4783. Neubauer, V. E. Die Persönlichkeitsfeststellung bei Maturanten. (Determining the personality of high school graduates.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 446-452.*—The bureau of educational and vocational guidance of the University of Graz attempts to determine the personality characteristics of high school graduates in the following manner: Three months before the end of the school term a talk is given to the graduating class in which the value of vocational guidance is stressed. At that time a questionnaire is filled out by each student. This is followed by several lectures, given by specialists in the principal academic and non-academic fields, at which attendance is obligatory. Each student is rated by each of his teachers. A month before the end of the term the answers received on the questionnaires are discussed with the group. Finally each student is counseled individually and given a psychotechnical aptitude test. Group testing has not been found satisfactory. Experience has shown the necessity of asking several persons to rate each student in order to obtain an adequate picture of his characteristics, and of supplementing these ratings by a thorough aptitude test.—*H. Beaumont* (Kentucky).

4784. Newman, I. A. Vocational adjustment service in a family agency. *Family, 1937, 18, 54-58.*—In this article the vocational and placement service offered by the Jewish Social Service Bureau of Cleveland is described. The services include: psychological testing; vocational guidance for young persons; occupational counseling for adults; assistance in obtaining vocational training or retraining; placement at normal employment, sheltered employment, or made work; and scholarship investigation. Two case histories are reviewed.—*M. Keller* (Brown).

4785. Ohera, F. Der Schulpsychologe (Zusammenfassung). (The school psychologist; summary.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 776-777.*—*H. Beaumont* (Kentucky).

4786. Ohera, F. *Ergebnisse der Intelligenzprüfungen, das Milieu und Schulerfolg (Zusammenfassung)*. (The results of intelligence tests, environment and scholastic success; summary.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 777-778*.—H. Beaumont (Kentucky).

4787. Park, R. E. A memorandum on rote learning. *Amer. J. Sociol.*, 1937, 43, 23-36.—Rote learning may be conceived as a cultural phenomenon as well as a pedagogical problem. Like other social institutions, it seems to have had a natural history. As a problem, it is acute where the tradition of the folk school has not yet been superseded by more sophisticated methods of education. The negro rural school has certain advantages as a place for an educational experiment. In the educational process news, as distinguished from other more scientific and accredited knowledge, has a distinctive pedagogical value.—(Courtesy *Amer. J. Sociol.*)

4788. Robertson, R. K., & Tryhorn, F. G. Objective test form in a school certificate examination. *Brit. J. educ. Psychol.*, 1937, 7, 156-161.—School certificate classes in chemistry in three secondary schools took a specially constructed objective-form test. Results from standard matriculation papers and teachers' estimates were available for the same students. Between the special test and the standard matriculation examination the correlation was .80, between special test and teachers' estimates .69, between standard matriculation examination and teachers' estimates .80. The author accounts for the lower correlation with teachers' estimates as due to pupils' guesses.—K. M. Cowdery (Stanford).

4789. Rosander, A. C. An experimental course in quantitative thinking. *Sch. Rev.*, 1937, 45, 337-345.—Description of a course for high school students using problems met by workers, earners, and buyers to develop mathematical understanding of such terms as ratio, graphical methods, variation, and correlation.—M. E. Wagner (Buffalo).

4790. Rupp, H. *Über die Berufsberatung von Abiturienten in Deutschland*. (Vocational guidance of high school graduates in Germany.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 461-478*.—A survey of vocational guidance procedures in Germany, including "general" (embracing all occupations) and "academic" (limited to professions open to college-trained men and women), and involving questionnaires and tests. The former become significant only when the relative aspect of individual traits is emphasized and the personality picture thus obtained is related to the occupational demands. At present the interpretation of such data depends in part upon subjective attitudes and intuition, but further experience and a more scientific approach will tend to objectify the procedure.—H. Beaumont (Kentucky).

4791. Schürer-Waldheim, O. *Berufsberatung krimineller Jugendlicher*. (Vocational guidance of juvenile delinquents.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 366-374*.—Vocational guidance is a regular feature of the program of the new reform

school in Vienna. All new pupils are examined physically, psychologically, and when necessary psychiatrically. Before they are asked to decide on the trade for which they want to prepare, they are given vocational information and an opportunity to work for several weeks in different departments of the institution. Of 700 pupils entering, 56% had already changed their occupation (28% more than once, in one case 5 times), 39% had remained in the same line of work, and 3% had not chosen an occupation. Changes occurred most frequently at the age of 16, the same age at which criminal behavior was most frequent. The latter was probably an attempt to compensate for vocational failure, and it is likely that juvenile delinquency could be curtailed considerably by well-organized, universal vocational guidance. Its prophylactic influence would be specially great if it would treat vocational choice as an individual, psychophysical problem and would take into consideration the findings of genetic psychology.—H. Beaumont (Kentucky).

4792. Seracký, F. *Les examens psychotechniques dans les universités et dans les écoles polytechniques en Tchécoslovaquie*. (Psychotechnical examinations in the universities and technical schools of Czechoslovakia.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 486-495*.—The professional interests of students in higher educational institutions in Czechoslovakia are determined by means of a questionnaire which consists of six parts: Part I lists 150 intellectual professions; Part II contains 75 problems of intellectual life; Part III lists 150 games and diversions, and Part IV contains 64 character and personality traits. The subject is asked to express like or dislike for each of these items. Part V consists of opposites, 37 pertaining to types of work, 23 to the subject's attitudes toward people and things. The final part contains 50 questions relative to the subject's habits and experiences. This test was given to 400 freshmen. Comparisons with scholastic success showed that the answers to these questions constituted a remarkably accurate means of predicting scholarship. Psychotechnical examinations are now required of all freshmen enrolled in the colleges of arts and sciences, are being introduced in those of law and medicine, and are voluntary in the technical schools of the country.—H. Beaumont (Kentucky).

4793. Shannon, J. R., Fridiana, M., Gabrielis, M., & Leonardilla, M. Problems that principals would like to lay before parents. *Sch. Rev.*, 1937, 45, 364-367.—M. E. Wagner (Buffalo).

4794. Silberer, P. *Akademische Berufsberatung durch das psychotechnische Institut Zürich*. (Academic vocational guidance in the psychotechnical institute in Zürich.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 484-485*.—Vocational guidance must give information concerning job requirements as well as concerning personal qualifications. The former function involves: (1) personal experience; (2) interviews and questionnaires submitted to members of different professions; (3) psychological analy-

sis of professions; (4) psychotechnical examination of successful and unsuccessful professional men. The latter function involves: (1) intelligence and aptitude tests, and in addition any other psychological measure (graphology, Rorschach test, anamneses, etc.); (2) careful evaluation of self-analysis and of ratings by others; (3) intuitive understanding on the part of the advisor, to supplement objective measures of personality; (4) checking objective measurements by other persons as a control; (5) group tests and questionnaires, used only as supplementary material. There should be a continuous check on results through follow-up studies of students while in school and after employment.—*H. Beaumont* (Kentucky).

4795. **Smith, E. S.** Teaching the preschool child to reason. *Child Developm.*, 1937, 8, 191-193.—The author, a teacher, shows by illustrations from her own children's behavior now even the preschool child can be taught to understand causes and effects and so may "live in a real world of problems similar to the situations he will later encounter where he will need to figure things out for himself, stand upon his own decisions, and fight his own battles."—*F. D. McTeer* (Wayne University).

4796. **Smith, G. B.** Intelligence and the extra-curriculum activities selected in high school and college. *Sch. Rev.*, 1936, 44, 681-688.—This investigation of the relation of intelligence, as measured by tests of college aptitude, to participation in extra-curriculum activities by students in high school and college is based on data gathered for 512 students in six high schools in Minneapolis for the years 1922-1925 and the performance of the same students in the University of Minnesota between 1925 and 1929. The following conclusions and findings are reported: "In the case of men in high school, dramatics and publications draw disproportionately from the students of higher ability; athletics and music groups take more than their share from the lower groups. Publications and dramatics take the able women in high school and social activities draw the less able. In the music, dramatic, and publication groups in the university, the median ranks of the men participants are high. The activities with the less able men participants are the religious and the no-participation groups. Women in the dramatic and publication groups in the university have the highest ranks in ability, and those in music and semi-curriculum activities have the lowest. Dramatics and publications appear to lead the field in drawing able men and women, but no consistent trend is shown in the types of activities drawing the less able."—(Courtesy *Child Developm. Abstr.*)

4797. **Smith, H. J.** The need of the newer subjects. *Sch. Rev.*, 1936, 44, 497-505.—An appeal for a place for the newer subjects (art, music, industrial arts, commercial work, home-making, agriculture, guidance, speech, etc.) on lists of school offerings and in school budgets.—*M. E. Wagner* (Buffalo).

4798. **Štampach, I.** La sociologie des élèves de l'enseignement secondaire et le système d'informa-

tion pour les élèves (résumé). (The sociology of students in secondary education and the system of student information centers; summary.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 794.*—*H. Beaumont* (Kentucky).

4799. **Stejskal, C.** Selecting pupils for secondary schools. *C. R. 8 Conf. int. Psychotech., Prague, 1935, 783-794.*—During the past ten years, the author has given 2-hour group intelligence tests to 3214 applicants for admission to high schools in Czechoslovakia. Those in the lowest two quintiles were discouraged from entering. Results showed a correlation of .66 between scores on these tests and school grades. A number of reasons are listed to account for the failure of potentially successful students.—*H. Beaumont* (Kentucky).

4800. **Stuit, D. B.** Freshman personnel work in the Teachers College of the University of Nebraska. *Sch. & Soc.*, 1937, 45, 887-888.—Entering freshmen are given group guidance in an orientation course which aims to (1) adjust the student to the new environment, (2) teach principles of learning and thinking, (3) study and apply principles of personality development, and (4) study teaching as a profession. Individual guidance is given in stenographically recorded interviews with a subject matter advisor or with the freshman advisor who teaches the orientation course. The latter has on file the students' tests, questionnaires and high school personality ratings. In college the testing program consists of the Ohio psychological examination, a reading test, a personality inventory, the Strong vocational interest test, and the Bell adjustment inventory. The latter has been found useful in initiating a discussion of the student's personal problems. Such a program, though imperfect, has proved beneficial.—*M. Lee* (Chicago).

4801. **Sturtevant, S. M.** Some questions regarding the developing guidance movement. *Sch. Rev.*, 1937, 45, 346-357.—A consideration of the essentials of a functional guidance program.—*M. E. Wagner* (Buffalo).

4802. **Trajer, J.** Recherches faites dans l'armée tchécoslovaque sur les associations fondamentales de la multiplication et de la division (résumé). (Research concerning the basic relations of multiplication and division, undertaken in the Czechoslovakian army; summary.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 794-795.*—*H. Beaumont* (Kentucky).

4803. **Triplett, R. J.** Do you know the multiplication table? *J. appl. Psychol.*, 1937, 21, 233-240.—A test in multiplication up to 25×25 shows among a group of high school graduates only 1% with 100% accuracy, 24% with 98% accuracy, and 63% with 95% accuracy.—*R. S. Schultz* (Psychological Corporation).

4804. **Tucker, R. L.** Conflict between conscience and the state. *Relig. Educ.*, 1937, 32, 180-183.—Four cases are discussed wherein an individual in a university is placed in a situation resulting in conflict because military training is a part of the

university and has strong social approval whereas the individual desires to be exempt from such training because of scruples of conscience.—*F. A. Mote, Jr. (Brown).*

4805. Tvrdek, V. *Exploration de la capacité en calculs de l'enfant tchécoslovaque entrant dans la 1ère classe scolaire (résumé).* (An investigation of the mathematical ability of Czechoslovakian children entering the first grade; summary.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 795.*—*H. Beaumont (Kentucky).*

4806. Uguccioni, V. [Educational and statistical data on children of abnormal mentality in the elementary schools of Florence.] *Riv. Clin. pediat., 1935, 33, 1245.*—In a brief historical outline Uguccioni reports that the first institution in Italy for the education of abnormal children was established in Aosta in 1848; it accommodated the cretins in this region, and the asylum was closed after a short existence. In 1884 an asylum for the education of imbecile and idiot children was established in Sicily but was later transformed into a custodial institution. The first real educational institution for feeble-minded children was established in Liguria, in 1889. Then other institutions were built in Milan, Alexandria and Rome.—(Courtesy *Child Developm. Abstr.*)

4807. Vellinská-Ondrujová, L. *La reliabilité des fiches scolaires individuelles.* (The reliability of individual school reports.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 796-798.*—The prognostic and diagnostic value of school reports can be greatly enhanced if the teacher limits himself to brief factual statements of psychological significance. Information gained from parents is extremely valuable in this connection. Teachers' statements are more reliable in quantitative observations of psychological phenomena than in their evaluation. Simple tests can and should be developed to enable teachers to perfect their technique in this respect.—*H. Beaumont (Kentucky).*

4808. Velinský, S. *Deux lois de variabilité intra-individuelle à la base des réformes scolaires actuelles.* (Two laws of intra-individual variability at the basis of present school reforms.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 798-801.*—Considerable differences in the mental functions of the same individual are not exceptional, but to be expected, as is also the case with differences in the same mental function of different individuals. The child-centered school, in which instruction is adjusted to these inter- and intrafunctional variations, is the proper solution of the problem.—*H. Beaumont (Kentucky).*

4809. Walker, K. P. *Recent trends in selected Mississippi high schools.* *Sch. Rev., 1936, 44, 533-538.*—There is evident between 1929 and 1936 a constantly increasing enrolment and an increasing percentage of boys, approaching 50% of all pupils; the number of high school graduates and the number of graduates entering college has not kept pace with the rising enrolments. The number of teachers

definitely declined during this period. On the average, the teachers employed in good times were more highly trained.—*M. E. Wagner (Buffalo).*

4810. Walther, L. *L'orientation professionnelle vers les carrières libérales et ses bases psychologiques.* (Vocational orientation in non-technical professions and its psychological bases.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 496-513.*—The conclusion seems warranted that attitudes rather than aptitudes determine a person's special "gift" for one profession or another. General aptitude is the basis of professional work in general, while one's attitudes and aims cause one to select a specific profession which appears to be intimately related to these psychological states. If special abilities are inconsistent with this choice, their interference is minimal because of the facility with which they compensate and substitute among themselves. General intelligence and pronounced, definite attitudes are necessary factors of success in a professional career.—*H. Beaumont (Kentucky).*

4811. Wienert, W. *Über akademische Berufsberatung in Deutschland.* (Academic vocational guidance in Germany.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 513-521.*—The bureau of employment and unemployment insurance in Germany is responsible for general vocational guidance, while information concerning professions open to college-trained men and women is given by the universities themselves. The author lists the principal phases of the guidance procedure, with emphasis on a follow-up study of academic failures.—*H. Beaumont (Kentucky).*

4812. Wile, I. S. *Common sense in rearing children for life.* *Arch. Pediat., 1935, 52, 749.*—The author defines as common sense "what would be regarded as the ordinary sense or the locally prevalent sense based upon a feeling of logicity with its slight modification by intelligence. Such sense cannot be unusual in nature or beyond the customary levels of unguided thinking." It is believed that little of the progress made so far in child welfare can be laid at the door of common sense, and the main tenor of the article is in accord with this statement.—(Courtesy *Child Developm. Abstr.*)

4813. Williamson, E. G. *An analysis of the Young-Estabrooks studiousness scale.* *J. appl. Psychol., 1937, 21, 260-264.*—"By way of summary, we may conclude that for these two small samples of students, studiousness does make a small unique contribution to the correlation with college scholarship of tests of scholastic aptitude for one group but not for the other group. Moreover, this contribution does not have weight equal to that of high school scholarship. The studiousness score adds nothing to the correlation between high school and college scholarship."—*R. S. Schultz (Psychological Corporation).*

4814. Wilson, F. T., & Fleming, C. W. *Correlations of performance tests with other abilities and traits in grade I.* *Child Developm., 1937, 8, 80-88.*—"During the school year 1933-34 a variety of tests

was given to twenty-five children in Grade I of the Horace Mann School, Teachers College. These included tests of 'reading readiness'; many of the Gates Reading Diagnosis Tests; some reading achievement tests; mental ability tests, such as the Stanford Revision of the Binet-Simon test and various performance tests; certain psychological tests, as of perception and perseveration; and several measures of psychophysical and personality traits and of home background." Extensive intercorrelations between performance test scores and other traits and abilities seem to indicate that performance tests were somewhat related to mental and reading abilities. "A slight relationship with psychophysical abilities may have been present. In general, no relationship of consequence appeared between the performance tests and the personality measures used."—F. D. McTeer (Wayne University).

4815. Wolf, S. J. A comparative study of two groups of girls of relatively equal intelligence but differing markedly in achievement. *J. appl. Psychol.*, 1937, 21, 304-310.—Two groups of 50 girls each in the sixth grade in the New York City public schools, and American born of Italian descent, were matched in intelligence (IQ 82-94) and other factors. Personality test scores, items in the Binet test, and school subjects requiring relatively more reasoning than drill tend to differentiate the successful in academic subjects from the failures.—R. S. Schultz (Psychological Corporation).

4816. Zapan, G. Über den Aufbau der Unterrichtsfächer in den höheren Schulen. (The construction of courses in advanced schools.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 808-815.—Success in learning does not depend on the number of repetitions or on the pleasantness of the material, but primarily on the organization of the course. Best results are obtained when: (1) the subject matter is consistent; (2) the course is organized objectively; (3) its parts are well coordinated; (4) its parts are properly subordinated to the whole; (5) the content is meaningful; (6) unessential details are omitted; (7) the course can be methodically planned. Several high school courses were checked to determine how well they incorporated these factors.—H. Beaumont (Kentucky).

[See also abstracts 4531, 4562, 4568, 4598, 4618, 4637, 4685, 4688, 4820, 4822, 4833, 4834, 4847.]

MENTAL TESTS

4817. Elwood, M. I., Burchard, E. M. L., & Teagarden, F. M. An evaluation of the Kent oral emergency test. *J. appl. Psychol.*, 1937, 21, 75-84.—Correlations between IQ's on the Kent oral emergency test and the Binet test range from .88 to .96. The use of the Kent test is "extremely valuable in getting a more nearly real picture of the testee."—R. S. Schultz (Psychological Corporation).

4818. Finch, F. H., & Odoroff, M. E. The reliability of certain group intelligence tests. *J. appl. Psychol.*, 1937, 21, 102-106.—Reliability

coefficients for the Army Alpha, Pressey, Haggerty, Terman, and Miller intelligence tests are computed on a 12-year-old and a 14-year-old group of students entering high school.—R. S. Schultz (Psychological Corporation).

4819. Heller, I. Grenztests. (Borderline tests.) *Z. Kinderpsychiat.*, 1937, 4, 7-10.—A series of age-level tests of a simple sort with a range from 3 to 14 years, which the author has found valuable in his clinical work with retarded children.—D. Shakow (Worcester State Hospital).

4820. Hill, G. E. The effect of changed responses in true-false tests. *J. educ. Psychol.*, 1937, 28, 308-310.—"Analysis of 33,329 responses in true-false tests . . . shows that relatively few students change a recorded answer, 2.5 percent of all answers being changed. Changed answers are more apt to be right than wrong, but are much more often wrong than the answers to items that are not changed."—A. W. Melton (Missouri).

4821. Lladó, N. Sur un test collectif d'intelligence pour enfants de 3 à 7 ans. (A group intelligence tests for children between the ages of 3 and 7.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 768-771.—A modification of the Binet-Simon scale was given to 2000 children between the ages of 3 and 7, belonging to three social groups. This report is limited to data obtained on 1149 children in the city of Brussels who belonged to the lower economic stratum. There was a steady increase in scores from age to age, a slight superiority for the girls from age 5 on, and a considerable superiority for children who were enrolled in a higher grade as compared to those of the same age who were in a lower grade. An analysis of the test was made on 700 subjects, showing that certain items were too difficult, others caused confusion, and some were particularly suited to a certain age. Thus test items could be graded as to difficulty and characteristic items for each age grouped together.—H. Beaumont (Kentucky).

4822. Messenger, H. R. An illustration of new techniques in test construction. *J. appl. Psychol.*, 1937, 21, 311-319.—Items in tests for mental ability, arithmetic, reading, history and English were compared with honor points obtained by freshmen in a teachers' college. This analysis showed that on the basis of degree of difficulty and index of goodness of items it was possible to reduce the time of the test from 180 minutes to 60 minutes and the number of items from 448 to 206. The new composite test score correlates .47 with honor points of freshmen for the first quarter.—R. S. Schultz (Psychological Corporation).

4823. Mládek, F. Wie es möglich ist, die überwiegend exakttechnische Begabung festzusetzen. (How primarily technical aptitude can be determined.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 772-776.—A primarily technical aptitude is the opposite of the verbal-logical aptitude also involved in intelligence. The author has tested high school pupils during the past 12 years (an annual average of 250 or 300 subjects) and has developed tests to

measure both capacities: I. Technical aptitude: a. inventive: (1) completing series of digits arranged in special order; (2) dividing a drawing into two parts which may be combined into a square of the same area; b. receptive: (3) adding 10 rows of 2-place numbers and subtracting 10 rows of 2-place numbers; (4) rote memory for numbers and letters. II. Verbal-logical aptitude: a. inventive: (1) 20 words to be supplied, each analogous to 3 given words; (2) completion of 10 sentences (2 words omitted in each) and 5 sentences (3 words omitted); b. receptive: (3) 30 sentences in which 2 or 3 mistakes occur to be compared with the given correct sentences; (4) word memory. This test enables one to determine the relationship between the two aptitudes.—H. Beaumont (Kentucky).

4824. Rothery, J. W. M. The new Binet—a caution. *Sch. & Soc.*, 1937, 45, 855-856.—Testing with the new Stanford revision, reports of which will soon flood the journals, will be of value only if the experimenters are adequately trained in the use of the new instrument and in the reporting of results. Too frequently in the past courses in Binet testing have been slipshod, and students have begun testing without enough supervision to determine their accuracy or ability to establish rapport. "The use of intelligence tests has justified itself. Must their misuse continue to be tolerated?"—M. Lee (Chicago).

4825. Sims, V. M. A note on scoring the rearrangement test. *J. educ. Psychol.*, 1937, 28, 302-304.—A criticism and modification of Conrad's method for scoring the rearrangement test (*J. educ. Psychol.*, 1936, 27, 241-252), and an extension of the author's earlier analysis of the problem (*J. educ. Psychol.*, 1934, 25, 251-257).—A. W. Melton (Missouri).

4826. Třiska, K. A contribution to the problem of speed. *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 721-730.—The experiment consisted of giving two forms of an intelligence test to two groups of children in Prague, one group consisting of 135 children aged 11¾ years, the other of 43 children aged 13¾ years. In giving Form A, the work-limit method was used; two weeks later, Form B was administered with time limits, and the pupils were urged to work as rapidly as possible. In this case speed was measured by the number of items attempted, in the former case by the stop-watch. Results were correlated with school grades and the conclusions were the following: In serial reactions "working speed" is ordinarily measured and a common factor appears; its correlation with performance depends on the difficulty of the tests. In simple reactions "mental speed" is measured as an index of efficiency, and correlations obtained depend on the mutual propinquity of the functions measured. There seems to be no independent factor of "mental speed," which is only a measure of innate or acquired ability to perform a given function, though there appears to be an independent factor contained in failures and successes which is part of the "working speed."—H. Beaumont (Kentucky).

4827. Vernon, P. E. A study of the norms and the validity of certain mental tests at a child guidance clinic. II. *Brit. J. educ. Psychol.*, 1937, 7, 115-137.—In continuing discussion of the mental tests suitable for clinical use details are given regarding the Seguin-Goddard form board, the Healy picture-completion test II, Porteus mazes, passalong test, Moorrees form board, and Burt's graded word reading test. Results from use of these and previously described tests lead to conclusions that the voluntary clinic population is below average on almost all tests of ability (average Binet IQ 95 with standard deviation 16.6); that subjects of very superior intelligence are somewhat more liable to personality maladjustments than are the moderately superior; that a number of tests show significant discriminations in the affective field independent of level of intelligence, but more complete analysis is needed before specific interpretations can be recommended; that for cases of higher mental levels a battery of tests including Burt-Stanford-Binet, Burt's graded word reading test, Moorrees form board, Porteus mazes, and Healy picture-completion II and/or passalong are suitable.—K. M. Cowdery (Stanford).

[See also abstracts 4478, 4479, 4500, 4755.]

CHILDHOOD AND ADOLESCENCE

4828. Arrington, R. E. The impact of environment on the social and cultural development of the preschool child. *J. educ. Sociol.*, 1937, 10, 451-463.—This paper presents an evaluative summary of the techniques and findings of socio-psychological research on "the influence of social environment on patterns of behavior toward persons and toward social situations." The chief emphasis is on the preschool period. Direct observation of the interaction of the child and the family group is considered as scientifically most desirable, but as most difficult for experimental control. Indirect approaches have included (1) observation of children in nursery school groups, with the development of time-sampling techniques and a few experiments in modifying behavior; (2) descriptive surveys derived from reports of sociological field workers; (3) accumulation of clinical materials which help "to clarify our conceptions of what constitutes the young child's environment and . . . the significant points of impact."—W. McTeer (Wayne University).

4829. Ayer, M. E., & Bernreuter, R. G. A study of the relationship between discipline and personality traits in little children. *J. genet. Psychol.*, 1937, 50, 165-170.—This study attempts to discover whether there is any relationship between the kind of discipline used in the home and the personality characteristics of the children disciplined. The subjects were 40 children, measured by the Merrill-Palmer personality rating scale. Kinds of discipline studied were physical punishment, isolating or ignoring the child, natural results of child's act, worry, rewards or promised rewards, doing the first thing that comes into a parent's mind, temper, penance.

Biserial coefficients of correlation between the personality rating scores and the kind and amount of discipline used indicate that attractiveness of personality, tendency to face reality, and independence of adult affection or attention are fostered when children are allowed to profit by the natural results of their acts.—*E. Heidbreder* (Wellesley).

4830. Beach, A., & Beach, W. **Family migratoriness and child behavior.** *Sociol. soc. Res.*, 1937, 21, 503-523.—Case studies of children of one hundred transient families in California reveal an average school retardation of about one-third of a year, an average IQ of 103.78, and scholarship somewhat, though not greatly, below normal. Adjustments toward other pupils and toward the schools and teachers were estimated by teachers to be only "fair" or "poor." The entire group of migratory families was also compared with fifty families known to be stationary in seventeen environmental aspects of family existence. The relative order of importance of these items (family, relatives, friends, medical care, churches, schools, etc.) varies somewhat as between the two sets of families analyzed. The authors believe that the comparison shows a picture of gradual changing of older behavior attitudes typical of stationary life which can not help but influence children in their formative years.—*O. P. Lester* (Buffalo).

4831. Bender, L. **Behavior problems in the children of psychotic and criminal parents.** *Genet. Psychol. Monogr.*, 1937, 19, 229-339.—This is the report of a study of 60 children, two thirds of whom were boys, referred to the Children's Ward of the Bellevue Hospital. "The selection of cases has been dependent entirely upon the constructive evidence of the psychotic and criminal record of the parent." The parental psychoses included schizophrenia and affective, syphilitic and alcoholic psychoses. Defective epileptic and criminal parents were also represented. In the case of schizophrenia, "the evidence for constitutional defects is not entirely lacking. It seems to play a part in about one third of the cases. . . . In general there are more behavior problems in children of psychotic mothers than of psychotic fathers. . . . In general the behavior difficulties in the children become most serious in early puberty, although the disorder in the parent occurs earlier in the life histories of the children." There were many recorded behavior difficulties in the siblings of the children included in the present study. 27 references are given.—*F. M. Teagarden* (Pittsburgh).

4832. Bickford, J. V. **Enuresis in children.** *Virginia med. (Semi-) Mon.*, 1936, 63, 271.—The term "enuresis" is used to cover cases in which after a very complete physical examination no evidence of organic lesion can be discovered to account for the complaint. Bickford regards enuresis as a disorder of conduct, and in the series of 26 cases reported it was associated with one of the following difficulties of personality—unsatisfactory feeding, temper tantrums, nail biting, hypochondriasis, masturbation, fear reactions, encopresis. There

was observed in the majority of cases a general immaturity and failure to accept responsibilities in keeping with the age. Enuresis should be regarded as a symptom and treatment directed toward the child as a psychobiologic unit. The therapy includes: (1) convincing the child and the parent of their ability to overcome the difficulty and obtaining their cooperation; (2) explaining in simple terms methods of assistance, such as limiting fluids; (3) adjusting the environment to remove any stress and strain that lead to psychic disturbance. By the procedures named cure or improvement was obtained in 84% of the cases reported.—(Courtesy *Child Developm. Abstr.*)

4833. Briehl, M. H. **Die Rolle des Märchens in der Kleinkindererziehung.** (The role of the fairy story in the education of young children.) *Z. psychoanal. Pädag.*, 1937, 11, 5-19.—Fairy tales may help or hinder the young child in the solution of his manifold mental problems. They do not cause neuroses or other difficulties, but may intensify those which already exist. For this reason fairy stories should be carefully selected by the psychoanalytically trained teacher. According to their emotional content, they can be classified as: (1) moral (super-ego) stories, (2) Oedipus and castration stories (which may be designed either to increase or to solve conflicts), (3) pregenital stories (emotional, perverse or humorous). A proper selection will use only such stories as will aid the individual child to clarify his concepts. This is a necessary part of an educational program which gives proper consideration to the mental development of the child.—*H. Beaumont* (Kentucky).

4834. Cane, F. **The gifted child in art.** *J. educ. Sociol.*, 1936, 10, 67-73.—There are definite qualities evaluated in determining the talent of a child. Ability judged by intuition is not sufficient. Body, physique, mind, spirit are factors which must also be considered. An attempt is made to show the mode of expression and the variety of forms characteristic of the child gifted in art. Gifted children are treated normally so as not to destroy their balance. "The continuous development of a child showing talent can be maintained better through an understanding of what helps to foster it and what causes it to disappear, and it gives a teacher a clearer idea of where his effort should be directed."—(Courtesy *Child Developm. Abstr.*)

4835. Davis, E. A. **The mental and linguistic superiority of only girls.** *Child Developm.*, 1937, 8, 139-143.—While engaged in a linguistic study of children at 5½, 6½, and 9½ years of age the writer compared 97 only children with 166 twins and 173 non-only singletons. In each group there were equal proportions of boys and girls, and all were "selected on a percentage basis representative of the Minneapolis-St. Paul population, using the father's occupation as the criterion." "'Onliness' apparently is as effective in inducing variety of word usage as ten months of chronological age, and increases the length of sentence as much as fourteen months of

chronological age." This linguistic superiority of only children holds for both boys and girls; in addition only girls show an average IQ of 110.6 as compared with 101.9 for non-only girls in the same sampling.—*F. D. McTeer* (Wayne University).

4836. Denk, P. *Der Einfluss des Kinos auf die Kinder* (Zusammenfassung). (The influence of movies on children; summary.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 741-742.*—*H. Beaumont* (Kentucky).

4837. Disman, M. *Über den Versuch einer Feststellung des Einflusses von Theater und Kino auf die Schuljugend im Alter von 11-14 Jahren* (Zusammenfassung). (An attempt at determining the influence of the theater and movies on school children between the ages of 11 and 14; summary.)—*C. R. 8 Conf. int. Psychotech., Prague, 1935, 743-744.*—*H. Beaumont* (Kentucky).

4838. Drake, R. M. *Outline-workbook for educational psychology*. Macon: Author, 1937. Pp. 139.—This outline and workbook attempts to supply the motive for "active relation educing, insight, and new combinations of old percepts" in the understanding of the subject matter. The mechanical memorization of facts is considered less important than the recognition of the relationship of these facts to other things. The book is divided into two parts: an outline of subject matter which includes suggestions for teachers and a series of questions and exercises covering each chapter of the outline. Four quizzes and a final examination on the material given are available.—*M. Keller* (Brown).

4839. Edgell, B. *Dickens and child psychology*. *Brit. J. educ. Psychol.*, 1937, 7, 162-171.—The degrees of sympathetic understanding and treatment of children today and in the time of Dickens are contrasted. From the novels of Dickens are quoted or summarized passages illustrating his insight into the mental life of various types of children—the abused, the defective, the introspective, and the effeminate.—*K. M. Cowdery* (Stanford).

4840. Fales, E. *A rating scale of the vigorousness of play activities of preschool children*. *Child Developm.*, 1937, 8, 15-46.—"Using the method of expert judges, a rating scale of the vigorousness of the activities of preschool children was constructed." The scale as presented consists of 651 activities ranging in vigorousness level from 1, "lying inactively on floor or bed," to 48, "running while pushing or pulling loaded wheelbarrow up inclined board." "The data consist of detailed diary records taken with the aid of a stop watch. Two forty-minute observations were made on each of 32 preschool children, 16 boys and 16 girls paired as to chronological age. When these observations were classified according to the rating scale, it was found that the mean vigorousness score was 13.28."—*F. D. McTeer* (Wayne University).

4841. Fales, E. *A comparison of the vigorousness of play activities of preschool boys and girls*. *Child Developm.*, 1937, 8, 144-158.—From detailed diary

records for two 40-minute observation periods for each of 32 preschool children, 16 boys and 16 girls, paired according to chronological age, a vigorousness score was obtained for each child according to the scale of the vigorousness of activities of preschool children (see XI:4840). These scores "show striking similarity between the vigorousness of the activities of preschool boys and girls. Not only are the mean vigorousness scores almost identical (13.50 for boys, 13.06 for girls), but the percent of total time they spend at each vigorousness level is almost the same." "There is no significant relation between IQ and vigorousness," although "children with low chronological and mental ages tend to take part in more vigorous activities than the children chronologically and mentally older."—*F. D. McTeer* (Wayne University).

4842. Flannery, R. *Child behavior from the standpoint of the cultural anthropologists*. *J. educ. Sociol.*, 1937, 10, 470-478.—The author, an anthropologist, reviews some of her findings among the Cree Indians in Canada in illustrating effects of culture impact upon child behavior. Studies of individual differences in acculturation, comparison of our own with primitive cultures to determine what is cultural, to clear the way for measurement of impact by socio-psychological techniques are suggested as possible anthropological contributions to the understanding of child behavior. The lower nomadic groups are recommended as offering specific research possibilities. Limitations of anthropological approach are also indicated: (1) even a year of resident study is insufficient for a complete longitudinal study; (2) statistical studies are not feasible due to the small size of the groups; (3) the primitive language is difficult to master and yet is desirable for such studies.—*W. McTeer* (Wayne University).

4843. Frenkel, S., Fayer, M., & Kósa, J. *Kisgyermekek játékaik szilárd szerkezetű tárgyakkal. Kisgyermekek játékaik laza szerkezetű tárgyakkal*. (Children's activity with respect to solid and non-compact objects.) *Lélektani Tanulmányok*, 1937, 1, 40-44; 45-49.—Children from 2½ to 4½ years of age were let alone into a room where objects were spread out on a carpet and were allowed to play with them for 30 minutes. Objects of simple shapes were preferred; forms of activity noted were moving, changing, and creating. Hard objects were preferred to soft ones. English summary.—*F. A. Mote, Jr.* (Brown).

4844. Green, R. *The inner significance and the outward expression of children's problems*. *Family*, 1937, 18, 85-90.—*R. R. Willoughby* (Brown).

4845. Jennebach, N. *Die leiblich-seelische Geschlechtsentwicklung des Kindes und Jugendlichen und ihre Stellung in Familie, Schule und Gericht*. (Mental and physical sex development in children and adolescents and its place in the family, school, and court.) Leipzig: Teubner, 1937. Pp. 167. RM. 3.60.—*R. R. Willoughby* (Brown).

4846. Kantrow, R. W. An investigation of conditioned feeding responses and concomitant adaptive behavior in young infants. *Univ. Ia Stud. Child Welf.*, 1937, 13, No. 3. Pp. 64.—The spontaneous sucking behavior of 16 infants ranging in age from 6 to 14 weeks was conditioned to the sound of a buzzer. The data consist of objective records of sucking and of protocols of behavior. The establishment of the stable conditioned response required 3 to 9 experimental feedings, which contained 16 to 53 paired stimulations. One to five days were required to establish stable conditioning. The progressive inhibition of crying during the conditioning interval and the appearance of the maximal sucking response closer to the onset of the conditioning interval, as experimental feedings were continued, demonstrated the anticipatory character of the conditioned response. The strength of the unconditioned and conditioned sucking response was found to bear a direct relationship to the degree of hunger. The behavioral pattern underwent marked changes in the course of an extinction study. In both anticipation and extinction the economy of the organism was manifest. The infants exhibited the capacity to utilize significant signals and to discard false leads, activities which are found in more complex forms in the adaptive behavior of children and adults. Thus infants less than 4 months of age demonstrate some activities which are characteristic of intelligent behavior.—B. Wellman (Iowa).

4847. Koeninger, R. C. An attitude consistency of high school seniors. *Sch. Rev.*, 1936, 44, 519-524.—Questionnaires administered to 674 high school seniors (287 boys and 387 girls) showed only one-fourth with consistent attitudes. Of the consistent opinions 60% were conservative, 37% liberal, 2% radical, and none reactionary. "The whole group was most reactionary and conservative regarding issues surrounded by national traditions, prejudices, and fears. The pupils were liberal and radical on those issues in which they have personal contacts and interest."—M. E. Wagner (Buffalo).

4848. Lahy, B. Etude expérimentale sur la variabilité des goûts des enfants. (An experimental study of the variability of children's tastes.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 356-363.—An interest questionnaire, containing 70 items arranged in 7 groups (pertaining to: school, games, reading, social activities outside the classroom, manual labor, intellectual work, and ambitions), was submitted to children between the ages of 11 and 14 from Parisian laboring groups. The same questions were again answered by the same children three months later, and the Yule coefficients of correlation between their answers computed. It was found that certain expressed likes changed considerably at a certain age, less at another. For instance, "teaching" interest showed a consistency of .43 at age 11, .96 at 12, .71 at 13 and .75 at 14. Those engaged in assisting children in their vocational orientation should bear in mind that such a preference, expressed before the age of 12, has little significance.—H. Beaumont (Kentucky).

4849. Lerner, E. New techniques for tracing cultural factors in children's personality organization. *J. educ. Sociol.*, 1937, 10, 479-486.—The author recommends modification of the Piaget analysis of thought to recognize culture milieux, followed by intensive investigation, using Piaget's technique, of "the problem of children's personality development in terms of cultural conditions."—W. McTeer (Wayne University).

4850. Levy, D. M. Thumb or finger sucking from the psychiatric angle. *Child Develpm.*, 1937, 8, 99-101.—"Previous observations and clinical studies have demonstrated that the primary cause of finger sucking is insufficient sucking at breast or bottle." "In general psychiatric advice as to the habit has been to ignore it." In cases in which "the absorption in the act is sufficiently great to prevent normal interest in other activities" or in which there is danger of malformation of the jaws, the habit may be broken up by reduction of emotional tension, direct rational appeals to the child, inhibitory devices, or the introduction of substitute activities.—F. D. McTeer (Wayne University).

4851. Lewis, S. J. The effect of thumb and finger sucking on the primary teeth and dental arches. *Child Develpm.*, 1937, 8, 93-98.—Study of the primary teeth and dental arches of 30 thumb sucking children over a period of years shows that in all but six instances some deformity of the teeth was present as a result of the thumb sucking habit. When this habit is broken up before the appearance of the permanent teeth the deformities may be trusted to correct themselves. These conclusions are illustrated by photographs of ten sets of dental impressions.—F. D. McTeer (Wayne University).

4852. Little, N. F., & Williams, H. M. An analytical scale of language achievement. *Univ. Ia Stud. Child Welf.*, 1937, 13, No. 2, 47-78; 88-94.—This study represents a preliminary attempt to analyze and scale language achievement of children from birth to 6 years of age. 285 children from 1 month to 80 months of age were tested. The conversation of two children while they were playing with material provided for the purpose was observed and scaled according to speech sounds, intelligibility, and sentence organization. For children under 2 years of age the interview method was substituted. The items chosen showed a gradation in difficulty in terms of the percentage of children at each age level scoring success on an item. Below-normal mental age accompanied by an orphanage environment appeared to lower linguistic achievement at all ages included in the study.—B. Wellman (Iowa).

4853. Lodgen, P. Some criteria for the treatability of mothers and children by a child guidance clinic. *Smith Coll. Stud. soc. Work*, 1937, 7, 302-324.—"A definite relationship between change in the mother's attitude and improvement in the child was found. In the 11 cases in which the mothers showed a great change, as well as in the four cases showing some change, all the children were successfully adjusted by the end of treatment. In the 15

cases in which the mothers' attitudes showed no change, six of the children were successfully adjusted and nine remained unimproved. . . . Most of the mothers whose attitudes showed no change during treatment were excessively dominating and aggressive. Many were extremely irritable, excitable, and unreasonable. They were generally self-centered and had a very narrow range of interest. The mothers whose attitudes became greatly changed during treatment were of a different personality type. For the most part, they were very insecure and felt inferior and were extremely conscientious."—*R. H. Brown (Clark)*.

4854. Longstaff, H. P. Mothers' opinions of children's radio programs. *J. appl. Psychol.*, 1937, 21, 265-279.—This investigation presents further data on a series of questionnaire studies made by students in interviews with mothers. Radio programs are effective in inducing children to ask parents to buy products. Effectiveness of the method varies with commodity. The attitudes of mothers are about equally for and against such methods. Opinions of mothers on content of radio programs reveal information concerning suitability, objections, and suggestions for changes.—*R. S. Schultz (Psychological Corporation)*.

4855. Marshall, E. L. A comparison of four current methods of estimating physical status. *Child Developm.*, 1937, 8, 89-92.—"Four methods of estimating physical status; the Baldwin-Wood age-height-weight table, the Pryor and Stoltz age-hip-height-weight standards, the Franzen and Palmer ACH Index, and the McCloy age-height-hip-chest-knee-weight standards were employed on 77 elementary school boys. The results obtained by the application of the Baldwin-Wood tables and the McCloy standards were similar but those secured by the Pryor and Stoltz standards and the ACH Index were heterogeneous."—*F. D. McTeer (Wayne University)*.

4856. Melcher, R. Development within the first two years of infants prematurely born. *Child Developm.*, 1937, 8, 1-14.—42 healthy prematurely born infants, ranging in age from one month fifteen days to eighteen months twenty-five days, were examined by means of the Bühler-Hetzer infant scale. "Quantitative analysis of the tests showed that these infants lagged behind the average for children born at term up to five months of age, but scored within average limits thereafter. There was a low positive correlation ($.41 \pm .08$) between birth weights and developmental quotients." Qualitative analysis showed these children (within the age limits tested) to be somewhat advanced in sensory perception and, on the average, somewhat retarded in postural control.—*F. D. McTeer (Wayne University)*.

4857. Meredith, H. V., & Knott, V. B. Changes in body proportions during infancy and the pre-school years: I. The thoracic index. *Child Developm.*, 1937, 8, 173-190.—Tables of mean thoracic indices (percentage relation of chest breadth to chest depth)

are given for each sex separately for ages between three months and six years. These values are "derived from around 3500 paired thoracic measurements taken on approximately 1000 Iowa City children of northwest European ancestry." Analysis of concomitant variations in the growth rates for the transverse and antero-posterior dimensions of the thorax indicates that "the rising thoracic index between three months and five years of age is due, in the main, to increase in transverse diameter in the absence of increase in sagittal diameter during the third year and to more rapid rate of increase in transverse diameter than in sagittal diameter during the age spans before and following the third year." A review is made of the research literature on the thoracic index (24 titles).—*F. D. McTeer (Wayne University)*.

4858. Miller, E. The child and the adolescent under the care of local authorities and voluntary institutions: general emotional training and guidance in sex behavior. *Hlth & Empire*, 1936, 11, 310-317.—*R. R. Willoughby (Brown)*.

4859. Mott, S. M. Mother-father preference. *Character & Pers.*, 1937, 5, 302-304.—Three pertinent questions (Nos. 3, 5, 6) in Rogers' scale for maladjustment were used with 724 six-year-old boys and girls as a basis for this study. The results are summarized thus: (1) for first choice, mother is chosen in preference to father by both boys and girls; (2) in two of the three items the percentage of boys placing the father in the first place is greater than that for girls; and (3) a larger percentage of girls placed their fathers first than did the boys when called upon to rate the immediate family.—*M. O. Wilson (Oklahoma)*.

4860. Motta, B. Das Schwärmen beim sittlich verwahrlosten weiblichen Fürsorgezögling. (Daydreams in morally neglected girl orphans.) Lucerne: Inst. f. Heilpädagogik, Verl. Abt., 1937. Pp. 41. Fr. 1.50.—*R. R. Willoughby (Brown)*.

4861. Mowrer, H. R. The study of marital adjustment as a background for research in child behavior. *J. educ. Sociol.*, 1937, 10, 487-492.—The author suggests a change in methodology of approach to child adjustment problems. Instead of beginning with the child and working backward, it is suggested that the life history begin with the antecedents of the marriage situation into which the child was born. The approach is illustrated with a case history. Six advantages of the method are pointed out at the end of the article.—*W. McTeer (Wayne University)*.

4862. Newhall, S. M. Identification by young children of differently oriented visual forms. *Child Developm.*, 1937, 8, 105-111.—The 16 subjects, varying in age from three to five years, appear to identify the Bailey visual perception test materials with the same degree of accuracy irrespective of the normal orientation, left-right reversal, or top-bottom reversal of the forms to be matched. Within the limits of the experiment accuracy was independent of age of subject and size of test object.—*F. D. McTeer (Wayne University)*.

4863. Palmer, C. E., Kawakami, R., & Reed, L. J. Anthropometric studies of individual growth. II. Age, weight, and rate of growth in weight, elementary school children. *Child Developm.*, 1937, 8, 47-61.—"The study is based on approximately 8000 observed annual increments in body weight of elementary school boys and girls between the ages of six and fourteen years. A tabular and graphic analysis of these data in age and sex and weight specific classes shows the following: During the period of growth in which boys increase from 32 to 68 pounds in weight and girls increase from 32 to 60 pounds, the primary factor which influences growth is body weight already attained. When weight reaches the upper limit of these ranges, growth is influenced by attained chronological age, although attained weight is still the stronger factor in growth."—F. D. McTeer (Wayne University).

4864. Pintner, R., & Brunschwig, L. A study of certain fears and wishes among deaf and hearing children. *J. educ. Psychol.*, 1937, 28, 259-270.—The authors compared the responses of deaf and hearing public school children to a check list of 39 fears and to 7 sets of wishes which permitted a choice between a desire for immediate fulfillment of a small gratification and a delayed greater gratification. The deaf children reported more fears and expressed more often the desire for immediate gratification of a wish. The difference between deaf and hearing girls is much greater than that between deaf and hearing boys. Correlations between the scores on the fears and wishes tests and age, intelligence, age at becoming deaf, and per cent of hearing in the better ear were slight and in no case reliable.—A. W. Melton (Missouri).

4865. Remmert, O. *Kind und Eigentum*. (The child and property.) Berlin-Lichterfelde: Verl. d. Hauslehrers, 1936. Pp. 19. RM. 0.80.—R. R. Willoughby (Brown).

4866. Roedl, A. *Wie Kinder dichten und denken*. (How children write and think.) Berlin-Lichterfelde: Verl. d. Hauslehrers, 1936. Pp. 15. RM. 0.80.—R. R. Willoughby (Brown).

4867. Rónová-Brožková, R. *L'étude psychologique de la lecture de la jeunesse à l'âge de la puberté*. (A psychological study of children's reading at the age of puberty.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 779-782.—A questionnaire containing 24 items was submitted to almost 1500 pupils in Prague, ranging in age from 12 to 18. Private libraries were used by 81% of the girls, 61.8% of the boys; public libraries by 89.5% of the girls, 71.9% of the boys. The number of books read per month varied from 3 to 9. Adventure stories and historical novels were preferred by 65.3% of the boys; girls preferred novels about young girls, later those with a sexual background.—H. Beaumont (Kentucky).

4868. Schuster, W. *Die natürliche Entfaltung der Intelligenz*. (The natural development of the intelligence.) *Int. Z. indiv.-Psychol.*, 1937, 15, 52-65.—Intelligence has a share in the development of

character, forming ideals for life, and choosing a profession. Beginning in infancy with sensory, prehensory, and locomotor mechanisms and their mutual associations, the author discusses conditions affecting development. A baby needs a quiet room not only to sleep but especially to hear its own early vocalizations. Failure to form clear associations between the sounds and the movements may cause speech disorders. Other practical suggestions about lighting, furniture, etc., are given. It is a mistake to cultivate the intellect at the expense of the instincts. Instincts cannot be trained directly, but should have opportunities to function naturally. Overprotection as well as insufficient protection may thwart development.—M. F. Martin (West Springfield, Mass.).

4869. Shea, A. L. Family background and the placement of illegitimate children. *Amer. J. Sociol.*, 1937, 43, 103-104.—From a study of the records of the State Board of Control of Minnesota covering the period 1918-1928 it is concluded that the background of adopted children is relatively superior to that of other illegitimate children. Data on age of parents, education and IQ of mother, marital status of mother's parents, etc., were taken into account.—F. A. Mote, Jr. (Brown).

4870. Smith, G. M. A phobia originating before the age of three—cured with the aid of hypnotic recall. *Character & Pers.*, 1937, 5, 331-337.—This is the history of a case, a young man of 19 years, in which there had developed an acute fear of darkness due to the pathological behavior of the father when the client was three years of age. A sense of guilt prevented discussion of the problem with adults, which aided in developing protective amnesia for the event. The phobia disappeared when recall of the experience was accomplished through hypnosis.—M. O. Wilson (Oklahoma).

4871. Stone, C. P., & Barker, R. S. Aspects of personality and intelligence in postmenarcheal and premenarcheal girls of the same chronological age. *J. comp. Psychol.*, 1937, 23, 439-445.—175 postmenarcheal and 175 premenarcheal girls paired for chronological age were compared with respect to Otis intelligence-test scores, personality and socio-economic status of parents. Postmenarcheal girls made a mean score on the Otis which was 2.25 points higher than that of the premenarcheal group. The difference was not statistically reliable. The Pressey interest-attitude scores showed the postmenarcheal girls to be more mature than premenarcheal girls of the same chronological age. Postmenarcheal girls were also more mature as measured by the Sullivan test for developmental age. Both of these differences were statistically reliable. The Bernreuter personality inventory failed significantly to differentiate postmenarcheal and premenarcheal girls of the same chronological age. The two groups were from families of approximately the same socio-economic status. Bibliography.—N. L. Munn (Peabody).

4872. Sutton, H. The child guidance clinic. *Brit. med. J.*, 1935, p. 495.—The article includes a

brief discussion of the problem child and the conditions which induce the problems, suggestions for the correction of the behavior, and a brief statement of desirable locations for the holding of child guidance clinics.—(Courtesy *Child Developm. Abstr.*)

4873. Symonds, P. M. Changes in sex differences in problems and interests of adolescents with increasing age. *J. genet. Psychol.*, 1937, 50, 83-89.—A comparison of the problems and interests of high school boys and girls indicates that sex differences in interests are greater than the differences in problems. Differences in both problems and interests are greater in late adolescence than at any other time of life. At the time when men and women are most fecund biologically they are most unlike each other in their interests. Men's interests are related to an urge toward success; women's interests indicate greater passiveness, receptivity, and responsiveness to people. Men are more interested in physical health, safety and money, and possess a more openly expressed interest in sex. Women are more interested in personal attractiveness, personal philosophy, planning the daily schedule, mental health, manners, personal qualities, and home and family relationships.—E. Heidbreder (Wellesley).

4874. Thom, D. A., & others. A study of one hundred and twenty well-adjusted high school students. *Bull. Mass. Dep. ment. Dis.*, 1936, 20, 3-106.—R. R. Willoughby (Brown).

4875. Tisdall, F. F. The effect of nutrition on the primary teeth. *Child Developm.*, 1937, 8, 102-104.—In an experiment covering one year with 162 children in a Toronto institution it was found that "in a group given the standard diet which is deficient in Vitamin D the incidence of caries in the deciduous teeth was more than double that found in the other group of children receiving the same diet but with added Vitamin D."—F. D. McTeer (Wayne University).

4876. Weisman, S. A. The relationship of the flat chest to intelligence. *Ann. intern. Med.*, 1935, 9, 451.—Previous observations by the author that the chest of the healthy normal adult is flat and that children from better environments not only are taller and heavier but have chests of the flat type prompted this study to determine the relationship of the shape of the chest to intelligence. The material consisted of 14,844 Minneapolis school children between the ages of 5 and 7. The numbers of boys and girls were approximately equal. Intelligence was determined by the grades the children received in their school work. The pupils were grouped on the basis of their grades, and the average thoracic index was determined for each group according to age. The conclusion was reached that the flat-chested children are, on the average, taller and heavier and display a higher degree of intelligence than the deep-chested children.—(Courtesy *Child Developm. Abstr.*)

4877. Wight, M. G. The effect of training on rhythmic ability and other problems related to

rhythm. *Child Developm.*, 1937, 8, 159-172.—Tests of motor coordination (speed of tapping) and rhythmicization (reproduction of a pattern of taps) were administered to 47 children, all ambulatory cases, ranging in age from 57 to 187 months, at the Country Home for Convalescent Crippled Children in Chicago. The children were then divided into two groups matched for chronological age, IQ, and rhythmicization. One group, which was given a regular program of rhythmic activities (beating time to music, rhythm band, folk dancing, etc.) over a period of two months, showed on a final retest a gain of 18.4% in rhythmic ability, whereas the second group, which had had no rhythmic training, showed a gain of only 2.3% on a similar retest. "Rhythmicization is subject to improvement by both specific and general training, no matter what the initial level of ability may be."—F. D. McTeer (Wayne University).

4878. Zeligs, R. Racial attitudes of children. *Sociol. soc. Res.*, 1937, 21, 361-371.—200 sixth-grade children from a large city elementary school in a superior residential section wrote the most interesting true sentences they could about each of 38 nationalities or races. About one minute was allowed for each sentence, making the procedure similar to an association test. Their concepts of races as expressed in sentences show a degree of similarity of response and suggest a marked tendency toward stereotypes. There were no unfavorable attitudes expressed toward Americans or Jews (82% of children tested were Jewish). As regards negroes, there were about an equal number of sentences which could be classified as favorable, neutral, and unfavorable.—O. P. Lester (Buffalo).

4879. Zorbaugh, H. Is instability inherent in giftedness and talent? *Proc. Inst. Except. Child, Child Res. Clin.*, 1936, 3, 30.—Read by title only.—M. Keller (Brown).

4880. Zuck, T. T. The relation of physical development to mental expansion. *Proc. Inst. Except. Child, Child Res. Clin.*, 1936, 3, 6-15.—Investigation of the growing process and the gradual unfolding of structural change of both mind and body reveal that there is a proper tempo which should be adhered to if the hereditary expectancy is to be accomplished. Many of the deviations which we have hitherto regarded as hereditary are really the result of some sheer accident of disease or other vicissitude which disturbs the physiological equilibrium necessary to adequate physical and mental development. Such deviations lend themselves to medical and psychological treatment even to the extent of nearly complete rehabilitation.—M. Keller (Brown).

[See also abstracts 4480, 4489, 4491, 4492, 4495, 4497, 4517, 4546, 4547, 4552, 4562, 4564, 4566, 4575, 4576, 4584, 4613, 4624, 4625, 4627, 4635, 4636, 4644, 4652, 4676, 4752, 4756, 4780, 4795, 4812, 4827.]

